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All Subjects Include Theory & Questions with Rationales

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Preface

The Father of our Nation, Mahatma Gandhi once said, 'It is health that is the real wealth, and not pieces of gold and silver.'

Health is everything and it is a proven fact. We have to keep a sound health in order to excel in any spheres of our life, and this is what the Government of India thinks as well. All the Indian states are taking the issue of health very seriously and because of this reason every state is going to conduct CHO (Community Health Officers) exams.

We have realized that it is the need of the hour to come out with a compact book for the CHO aspirants. There are books available in the market related to this exam but there is a serious lack of quality books. The noteworthy point here is that the CHO exam requires serious preparation and devoted study. Keeping this fact in mind, we have presented the book, 'TARGET CHO' which is a panacea for all your troubles related to this exam. It contains the materials which are prepared exclusively for the CHO exam. The study of this book makes you super ready for this exam, and makes your success guaranteed. We are saying this with conviction because this book has been presented before you after doing intensive research and many subject experts have put in hard labor while molding and shaping this book exclusively for the CHO exam.

The salient features of this book reflect in the inclusion of more than 5000 MCQs which are given with and without rationales. Besides, it contains 200+ pages synopses and 17+ previous years paper. All the important subjects, viz. General Awareness, General English, General Intelligence and Reasoning Ability, Arithmetical and Numerical Ability, General Aptitude and English, have been included under separate sections. Special emphasis has been given to Community Health Nursing due to more weightage of the subjects; all the recent programs and policies have been dealt with more focus. This book has been developed keeping in mind the latest syllabus of NHM CHO.

With this book, we have continued our legacy of bringing out the best for you. We understand our responsibilities towards our esteemed readers and that is why, as usual, we have come up once again with a book which has an edge over any other books available in market.

Our success lies in your success!

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Continuous motivation during my preparations!

Thanks to the NNL team especially to Sakshi ma'am, Sabina Ma'am, and Mukhmohit sir. Their continuous guidance and support motivated me to give my best in the exams. SUPER 25 & Grand tests were really awesome. Thanks to all!

Bhawneesh
(AIR 9 - AIIMS NORCET 2021)

SUPER 25: Super se bhi upar!

First off, thanks to all the faculties of NNL. I had subscribed SUPER 25 and it was quite useful and helpful for me. I highly recommend the same to all the aspirants.

Jeniffer Devi
(AIR 3551 - AIIMS NORCET 2021)

Helped me score new highs!

SUPER 25 was a great help during my preparation phases and I score 97.96%. I am very grateful to this app.

Keya Roy
(AIR 1939 - AIIMS NORCET 2021)

From just a dreamer to a winner!

Thanks to the NNL team that made my last month highly productive. With SUPER 25 I was able to become a winner in NORCET 21. 90% Qs came from NNL classes only. Thanks from my family too.

Mahalakshmi M.
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I got what I wanted with SUPER 25!

The content that I got from NNL, I didn't get anywhere else. I had no doubts left before the exam. Just with 1st attempt, I got selected. Special thanks to Dr Sakshi ma'am.

Ramaram Prajapati
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SUPER 25 made me more confident!

My experience with NNL was amazing. SUPER 25 tests helped me amazingly to get an excellent AIR 34 in NORCET 2021. Exclusive content to study from. Just understand the explanation of the questions and you will be just more than done for your exams. Thanks to the whole team.

Ruby Dhankher
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SYNOPSIS

THE CELL

- The cell is the structural and functional unit of life.
- Living cells are divided into two groups:
 - Prokaryotes, e.g., Bacteria (unicellular)
 - Eukaryotic cells, e.g., Animal cells, plant cells, fungi and protozoa (unicellular or multicellular)

Table 1: Difference between prokaryotic cells and eukaryotic cells

Parameters	Prokaryotic cells	Eukaryotic cells
Cell size	Small (1–10 nm)	Large (1 to 10,000 times larger in size than prokaryotic cells)
Overall organization	Simple	Complex
Cell wall	Present	Absent
Cell membrane	Present sometimes surrounded by capsule	Present
Nucleus	Single nucleus which contains double helix DNA that is present in a poorly defined region called nucleoid	Well defined nucleus with a membrane and multiple DNA double helices organized into chromatin
Reproduction	Asexual	Sexual
Examples	Bacteria, blue green algae	Animal and plant cells



Key Points

Cell Organelles

Nucleus

- **Nucleus** is the largest component of the cell, containing DNA organized into separate chromosomes
- Nucleus is surrounded by nuclear membrane. Nuclear membrane consists of two layers
- The nucleus is filled with nucleoplasm which contains **nucleolus** and **chromatin**.

Endoplasmic Reticulum

- **Rough Endoplasmic reticulum (RER):** Also called granular type of endoplasmic reticulum. It contains ribosomes
- **Smooth Endoplasmic reticulum (SER):** Also called agranular type of endoplasmic reticulum. It does not contain ribosomes. SER has enzymes for biosynthesis of lipids and glycoproteins.

Ribosomes

- Ribosomes on the RER are involved in synthesis of proteins for export from the cell
- Free ribosomes present in the cytoplasm synthesize proteins for use within the cell.

Golgi Apparatus (Golgi complex, Golgi body)

- Golgi apparatus moves molecules from endoplasmic reticulum to their destination
- It is the site where secretions from other organelles are brought and assembled

Mitochondria

- Mitochondria contains its own DNA
- Mitochondrion produces energy in the form of ATP (Adenosine Triphosphate). So it is called as a “**power house of the cell**”.

Lysosomes

- Lysosomes are absent in RBC
- Lysosomes act as **waste disposal system of the cell**
- They are responsible for cellular homeostasis
- They are responsible for autolysis, so it is called as **Suicide-bags**.

Peroxisomes

- Major function of peroxisomes is in hepatocytes, involved in oxidation of fatty acids.

Cytosol

- It is a colloidal solution of proteins containing nearly 70% water.

Plasma Membrane (cell membrane)

- It is the outer membrane of the cell
- It is composed of lipids, proteins and carbohydrates

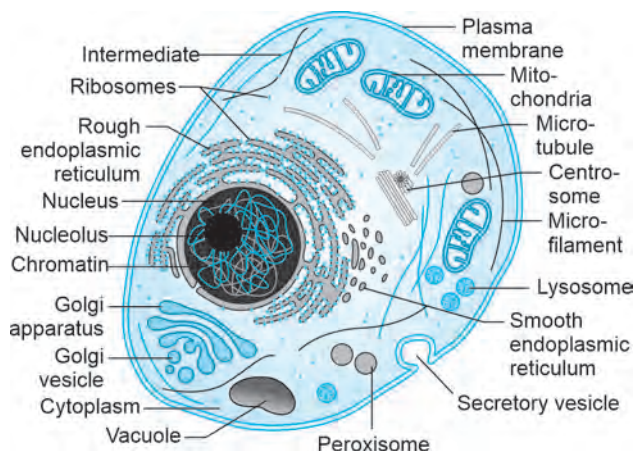


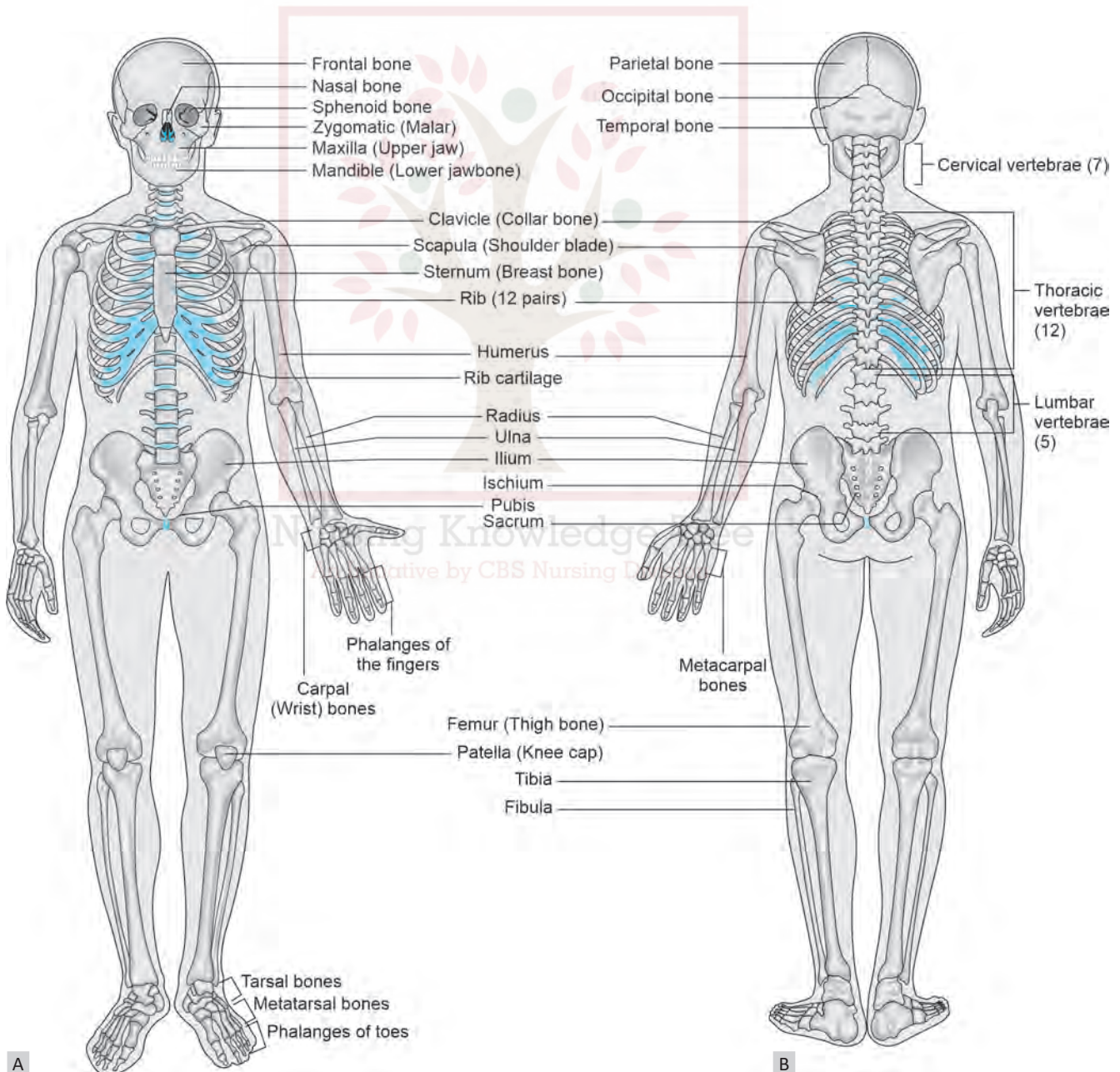
Figure 1: Animal cell structure

TRANSPORT MECHANISMS

There are three types of transport systems, i.e., Diffusion, Facilitated diffusion and Active transport.

- **Diffusion (simple diffusion or passive diffusion):** It is a process in which molecules of a material move from an area of higher concentration to an area of lower concentration.
 - **Osmosis:** It refers to the spontaneous net movement of solvent molecules through partially permeable (semipermeable) membrane into a region of higher solute concentration.
- **Facilitated Diffusion:** Transport of solutes through membrane transport proteins (carrier molecules) without expenditure of metabolic energy.
- **Active Transport:** Transport protein moves a specific molecule against the concentration gradient (lower concentration to higher concentration). This process requires energy provided by ATP.

ANATOMY AND PHYSIOLOGY OF MUSCULOSKELETAL SYSTEM



Figures 2A and B: Skeletal system of human body: (A) Anterior view; (B) Posterior view



“Sometimes the remedy is worse than the disease.”

—Chinese Proverb



MULTIPLE CHOICE QUESTIONS

(Including Explained and Practice Questions)

ANATOMY AND PHYSIOLOGY OF CELL AND TISSUES

- Mitosis is a condition of:**
 - Cell breakdown
 - Cell division without reduction
 - Cell death
 - Cell division with half chromosomes
- Powerhouse of the cell is:**
 - Mitochondria
 - Nucleus
 - Golgi bodies
 - Cell wall
- The aqueous component of the cell, within which various organelles and particles are suspended, is:**
 - Cytosol
 - Cytoplasm
 - Nucleus
 - Cytoplast
- Number of mitochondria is less in:**
 - Red fibers
 - Myosin
 - White fibers
 - Actin
- Storage house of iron in a cell is:**
 - WBC
 - Reticuloendothelial system
 - Platelet
 - Ribosome
- Largest organelle of a cell is:**
 - Golgi apparatus
 - Nucleus
 - Ribosome
 - Endoplasmic reticulum
- Suicidal bag of cell is:**
 - Ribosome
 - Lysosomes
 - Vacuole
 - Nucleus
- Structure and motility of the cell is maintained by:**
 - Cartilage
 - Microtubules
 - Nucleus
 - Golgi apparatus
- Produced form of energy is:**
 - ATP
 - ADP
 - GTP
 - Actin
- Protein factory in human cell is:**
 - Ribosome
 - Nucleus
 - Cytoplasm
 - Golgi apparatus
- _____ has no nucleus.**
 - RBCs
 - WBCs
 - Lymphocytes
 - Monocytes
- Name the tissue which is widely and most abundantly distributed in human body.**
 - Connective tissue
 - Cartilaginous tissue
 - Lymphoid tissue
 - Epithelial tissue
- The epithelial tissue that lines the urinary bladder is:**
 - Simple
 - Stratified
 - Transitional
 - Squamous

- Formation of scar tissue is:**
 - Fibrosis
 - Granulation
 - Adhesion
 - Keloid
- Antibodies are produced by:**
 - Plasma Cells
 - Lymphocytes
 - Erythrocytes
 - Basophils
- Secondary immune response is mediated by:**
 - IgA
 - IgG
 - IgM
 - IgE
- Humoral immunity is provided by:**
 - T-lymphocytes
 - B-lymphocytes
 - Immunoglobulin
 - Interferon
- Humoral immunity is also known as:**
 - Cell mediated
 - Antibody mediated
 - Natural
 - Interferon mediated
- T cell immunity is:**
 - Cell mediated
 - Antibody mediated
 - Natural
 - Interferon mediated
- Occurrence of certain disease or subclinical infection provides Immunity.**
 - Natural active
 - Natural passive
 - Active artificial
 - Passive artificial
- Vaccination provides immunity.**
 - Natural active
 - Natural passive
 - Active artificial
 - Passive artificial

MUSCULOSKELETAL SYSTEM

- Identify the hip bone from the following.**
 - Femur
 - Humerus
 - Innominate
 - Sacrum
- The muscle covers the shoulder and the back of the neck is:**
 - Trapezius
 - Masseter
 - Biceps
 - Temporalis
- Which bone is the largest bone in human body?**
 - Tibia
 - Radius
 - Femur
 - Humerus

Explanation: The largest bone in the human body is the femur, the thighbone. It is the largest, longest, and strongest bone in the human body.



Ans.

- b
- a
- b
- c
- b
- b
- b
- b
- a
- a
- a
- a
- c
- a
- b
- b
- b
- b
- a
- a
- c
- c
- a
- c

Barrier Nursing

Table 1: Barrier used in nursing

Types of isolation	When it is required	Technique used
Respiratory isolation	Droplet infection	Wear mask
Enteric isolation	Pathogens are transmitted via feces	Wear gloves and gowns while handling soiled article
Wound and skin isolation	Pathogens are present in wound and can be transmitted while coming in contact with infected wound	Wear gown and gloves
Blood isolation	Pathogens are found and spread via blood	Wear gloves while handling blood or body fluids

Handwashing

There are five moments of Hand Hygiene in healthcare:

1. Before touching the patient
2. After touching the patient
3. After touching the patient's surroundings
4. Before cleaning or aseptic procedure
5. After body fluid exposure risk

Steps of Handwashing (Six Steps of Handwashing as per WHO Highlighted)



Figure 1: Hand hygiene technique with soap and water

Source: WHO Guidelines on Hand Hygiene in Health Care: A Summary (2009)



HEALTH ASSESSMENT

It includes health history and physical assessment.

Techniques of Physical Examination

- **Inspection:** Visual observation of the client regarding client's health status.
- **Palpation:** The act of feeling with the hand; application of the fingers with light pressure on the surface of the body for the purpose of determining the conditions of the parts beneath. Bimanual palpation refers to palpation with both hands.
- **Percussion:** Tapping any part of the body and assessing the sound produced to collect information.
- **Auscultation:** Listening to different body sounds using instruments such as stethoscope.



Key Points

- Do physical examination in a sequence of inspection, palpation, percussion and auscultation except for abdominal examination.
- In **abdominal examination**, palpation and percussion can alter bowel sounds, so auscultate, percuss, then palpate an abdomen.

Table 4: Instruments used for physical examination

Instrument	Purpose
Ophthalmoscope	Examining the eyes
Otoscope	Examining ear
Stethoscope	Auscultation (Listening to body sounds)
Sphygmomanometer	To measure BP
Thermometer	To measure the body temperature
Urinometer	To measure the specific gravity of urine
Glucometer	To measure the blood glucose level
Snellen chart	To measure the visual acuity
Tongue depressor	To examine the oral cavity, by suppressing the tongue
Laryngoscope	To visualize larynx
Nasal speculum	To examine the nasal cavity
Percussion hammer	To check the reflexes

Reflexes

Table 5: Types of reflexes

Reflex	Description
Biceps reflex	Tapping of biceps tendon cause contraction of muscle
Triceps reflex	Tapping over olecranon process cause straightening of upper arm
Patellar reflex	Tapping just below the knee (patella) cause forward kicking movement of leg
Achilles reflex	Tapping over the Achilles tendon cause downward jerky movement

Contd...

Reflex	Description
Plantar reflex (Babinski reflex)	Stroking over the sole cause toe to bend downward, it is negative Babinski and is normal for adult. In children below 2 years of age, stroking over the sole cause toe to move upward and outward, that is called positive Babinski and is normal. Positive Babinski is considered as abnormal for adults.

Romberg's Test/Romberg's Sign (for Balance)

In this test, ask the person to stand with feet together and eyes closed. If the patient is able to maintain the equilibrium, then test is normal. But if the person falls down, then Romberg's test is positive which means patient has balancing problem. Most important nursing responsibility during this test is ensuring patient's safety.

SPECIMEN COLLECTION

Urine Collection

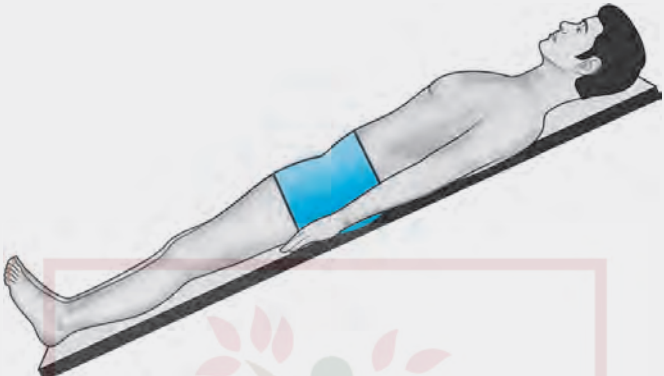

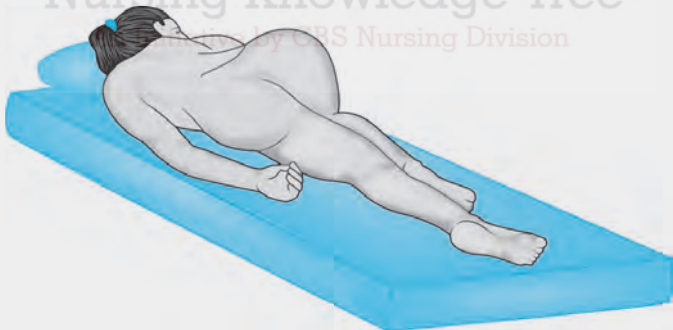

Table 6: Types of urine collection methods

Type of urine specimen	Remarks
Randomly collected specimen	<ul style="list-style-type: none"> • Not regarded as specimen of choice
First morning specimen	<ul style="list-style-type: none"> • Considered as specimen of choice for urinalysis and microscopic analysis • Generally more concentrated specimen
Mid-stream clean catch specimen	<ul style="list-style-type: none"> • Recommended for microbiological culture and sensitivity test • Before collecting the urine, the genitalia should be cleaned properly with soap and water
Timed collection specimen	<ul style="list-style-type: none"> • Required for quantitative measurement of certain analytes, e.g., Creatinine, urea
24 hours collection	<ul style="list-style-type: none"> • A variety of preservative agents (E.g., boric acid, concentrated HCl, formalin and chloroform) need to be added to the collection bag/bottle
Pediatric specimens (bag collection)	<ul style="list-style-type: none"> • A special urine specimen collection bag can be adhered to the skin surrounding genitalia

Table 7: Color of the urine and conditions

Color	Details
Pale yellow	Dilute urine
Milky white	Pyuria (pus in the urine)
Bright yellow	Multivitamins
Pink to red	Hematuria, rifampicin
Blue	Dyes in urine
Orange	Concentrated, jaundice, Nitrofurantoin
Black	Old RBC, porphyrin



Name of the positions	Descriptions and images	Uses
Reverse Trendelenburg	<p>It is just opposite to Trendelenburg position. In this position, head of the bed is elevated than the foot level with no flexion at waist level.</p> 	<ul style="list-style-type: none"> • To minimize gastroesophageal reflex
Lateral	<p>Patient is lying either on left or right side, with hip and knees flexed, top leg in front of the bottom leg. In this position pressure, on back and coccyx will be relieved and pressure is distributed along the scapula, lateral aspect of the ilium and the greater trochanter of the femur.</p> 	<ul style="list-style-type: none"> • To promote lung and cardiac function • To relieve pressure on back and coccyx • After liver biopsy right lateral position. • Patient with pyloric stenosis after meals right lateral to promote entry of food into stomach and intestine • During seizure attack and air embolism - left lateral
Sim's	<p>Patient is lying on left side with semi-prone position, one arm is located behind the patient and other arm is flexed at shoulder and elbow. Both legs are flexed at the level of hip and knee but the upper leg is more flexed and is drawn up to the level of chest.</p> 	<ul style="list-style-type: none"> • Rectal examination • Administering enema • To prevent aspiration
Low Fowler's	<p>In this position, head of the bed is elevated at 30° with flexion at the level of waist.</p> 	<ul style="list-style-type: none"> • To prevent aspiration during tube feeding • During increased ICP

Contd...



“Sometimes the remedy is worse than the disease.”

—Francis Bacon



MULTIPLE CHOICE QUESTIONS

(Including Explained and Practice Questions)

BASICS OF NURSING FOUNDATION

1. In 1871, the first school of nursing in India was started in:

- a. Government General Hospital, Madras
- b. CMC Hospital, Vellore
- c. RAK, Delhi
- d. Government Central Hospital, Mumbai

2. Every year, International Nurses Day is celebrated on:

- a. April 7
- b. May 12
- c. June 12
- d. December 1

Explanation: International Nurses Day is celebrated on May 12, which is the birthday of Florence Nightingale

3. Florence Nightingale, the lady with the lamp, helped sick people in:

- a. First World War
- b. Crimean War
- c. Greek War
- d. Vietnam War

Explanation: More information about Florence Nightingale

- Florence Nightingale (1820-1910) is the founder of Modern Nursing.
- She cared for sick people during Crimean war (1953).
- Environmental theory of Nursing was a contribution of Florence Nightingale.
- International Nurses day is celebrated every year on Florence Nightingale's birthday on May 12.

4. When instructing a patient about proper diet, which among the following would be considered as complete protein?

- a. Olives
- b. Rice
- c. Eggs
- d. Nuts

Explanation: Meat, poultry, Fish, Animal foods such as red meat, pork, poultry and fish are complete proteins.

5. Which of the following is the responsibilities of the staff nurse?

- a. Quality care
- b. Observation and reporting
- c. Record keeping
- d. All of these

6. Which of the following is NOT a heat loss mechanism from the body?

- a. Conduction
- b. Convection
- c. Evaporation
- d. Irradiation

Explanation: All the given options except option d are heat loss mechanism from the body. Irradiation is not a mechanism, radiation is the mechanism responsible for heat loss.

- **Conduction:** Heat loss occur when two bodies with different temperature comes in direct contact with each other.
- **Convection:** Air current carry away the temperature.
- **Evaporation:** When water is converted to vapor, the body temperature will be used that induces hypothermia.

7. Highest BMR is found in boys, because their body contains:

- a. Thyroxin
- b. Adrenaline
- c. Testosterone
- d. Estrogen

Explanation: Testosterone hormone present in the males is responsible for highest BMR in them.

8. Blood vessel that extends and branches out from an artery and leads to capillaries is:

- a. Venule
- b. Arteriole
- c. Capillary
- d. Sinus

Explanation: Arterioles are the blood vessel in the microcirculation that extends and branches out from an artery and leads to capillaries. A very small vein, especially one collecting blood from the capillaries and return to vein. Capillary beds can consist branch from arterioles and provide exchange between cells and the blood, and short vessels that directly connect the arterioles and venules at opposite ends of the beds.

9. A single nurse is assigned for care and she is responsible for directing and coordinating other nurses and other personnel. This type of nursing is known as:

- a. Functional nurse
- b. Primary nurse
- c. Team nursing
- d. Total patient care

Explanation: Option b is the correct answer. Functional nursing is task oriented. Team nursing is decision-making occurs over a single shift; largely by team leader or nurse manager. In total patient care, decision-making occurs over a single shift—either by an RN caring for the patient or by a charge nurse.

10. Vitamin which helps in wound healing is:

- a. Vitamin A
- b. Vitamin C
- c. Vitamin E
- d. Vitamin K

Explanation: Vitamin C (ascorbic acid) helps in wound healing. Vitamin E is known as Anti-Sterility Vitamin. Vitamin K helps in blood clotting. Vitamin A promotes good vision.

11. Largest immunoglobulin is:

- a. IgG
- b. IgA
- c. IgM
- d. IgE

Explanation: IgM is the largest immunoglobulin. It is also known as Macro-immunoglobulin.

12. Which immunity is affected by HIV infection?

- a. Natural immunity
- b. Active immunity
- c. Cellular immunity
- d. Humoral immunity

Explanation: HIV attacks and destroys the T helper lymphocytes, or T-cells, which are crucial to the immune system and immune response. CD4 T cells will be affected which is responsible for cellular immunity.



Ans.

- 1. a
- 2. b
- 3. b
- 4. c
- 5. d
- 6. d
- 7. c
- 8. b
- 9. b
- 10. b
- 11. c
- 12. c

Table 2: Some common examples for each level

Levels of prevention	Examples (commonly asked question)
Primordial prevention	<ul style="list-style-type: none"> Increasing taxes on cigarettes Decreasing advertisement of tobacco Access to safe walking paths Access to stores with healthy food options Prevention of bad food habits and to prevent smoking/alcoholism.
Primary prevention	<ul style="list-style-type: none"> Vaccination/immunization against various disease condition. Infection control measures such as hand washing Tobacco cessation programs Micro-Nutrient Supplementation Programs (Vit A prophylaxis, iodine supplementation) Environmental modification (avoid water lodging in nearby area to prevent mosquito breeding) Avoid smoking Water purification and sanitation Maintain ideal body weight and good personal hygiene Contraceptive methods to prevent STDs Quarantine for communicable disease Pasteurization of milk Wearing helmet and seat belt while driving
Secondary prevention	<ul style="list-style-type: none"> Papanicolaou (Pap) smear for early detection of cervical cancer Mammography, for early detection of breast cancer Colonoscopies, for early detection of colon cancer Blood pressure screening Breast self-examination Isolation for communicable disease School health check-up
Tertiary prevention	<ul style="list-style-type: none"> Rehabilitation efforts Occupational and physical therapy in burn patients Cardiac rehab in post-myocardial infarction patients Diabetic foot care Palliative and hospice care

- Alma-Ata Conference defines primary healthcare as an essential healthcare; made universally accessible to individuals and acceptable to them through their full participation and at a cost that the community and country can afford.
- In 1977, Government of India developed rural health scheme based upon the recommendation of Srivastava committee.
- It is a **three-tier system** based on the principle of placing people's health in people's hand.

Principles of Primary Healthcare

- Equitable distribution:** Health services must be shared equally by all people in perspective of their ability to pay and all must have access to health services.
- Community participation:** The involvement of individuals, families and communities in promotion of their own health and welfare.
- Intersectoral coordination:** Coordination between related sectors and aspects of national and community development, in particularly agriculture, animal husbandry, food industry, education housing, public works, communication and other sectors.
- Appropriate technology:** Technology with resources that a community and country can afford.
- Focus on prevention:** Promote health and healthy lifestyles with emphasis on prevention.

Table 3: Eight essential elements of primary healthcare

E	Education about health problems and methods of identifying, prevention, and control
L	Locally endemic disease prevention and treatment
E	Expanded program of immunization against major infectious disease
M	Maternal and child health including family planning
E	Essential drug arrangement
N	Nutritional and food supply
T	Treatment of common infections
S	Safe water supply and sanitation control

HEALTHCARE DELIVERY SYSTEM

Village Level

- One of the main features of primary Healthcare is equitable distribution and universal coverage.
- To achieve the aim at village level, the following schemes are functional:
 - ASHA scheme
 - ICDS scheme
 - Training of local dais

ASHA (Accredited Social Health Activist)

Characteristics

- She must be the **resident of the village**.
- A woman (unmarried/married/divorced) **preferably in the age group of 25–45 years** with formal education **up to 8th class**.
- She should have good communication and leadership skill.
- Usually, **ASHA serves 1000 population**. In tribal and hilly area, ASHA may be one per habitation.

HEALTHCARE DELIVERY SYSTEM IN INDIA

Primary Healthcare in India

- Following an international conference at **Alma-Ata (1978)**, a new approach to healthcare came into action and this was called primary healthcare.



DISASTER MANAGEMENT

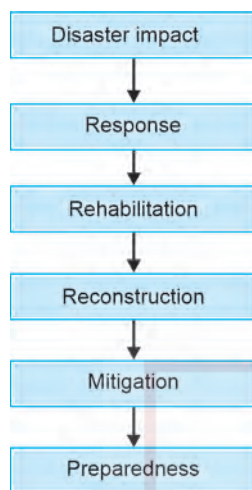


Figure 27: Management sequence of a sudden onset disaster

Disaster Impact and Response

- Search, rescue and first aid.
- Field care.
- **Triage:** Classify the victims according to the seriousness of injury.
- **Tagging:** All the patients should be provided with a tag which contains their name, age, etc.
- Identification of dead.

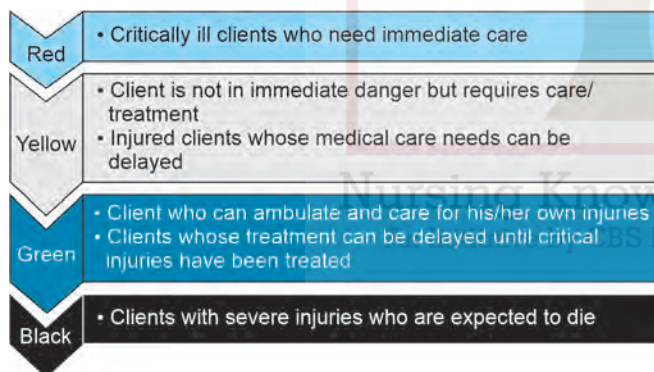


Figure 28: Tagging the clients

Rehabilitation

- Restoration of pre-disaster conditions. It starts from the time of disaster.

Disaster Mitigation

- It involves the measures, which are adapted to prevent hazard from causing emergency or to lessen the likely effect of emergencies.

Disaster Preparedness

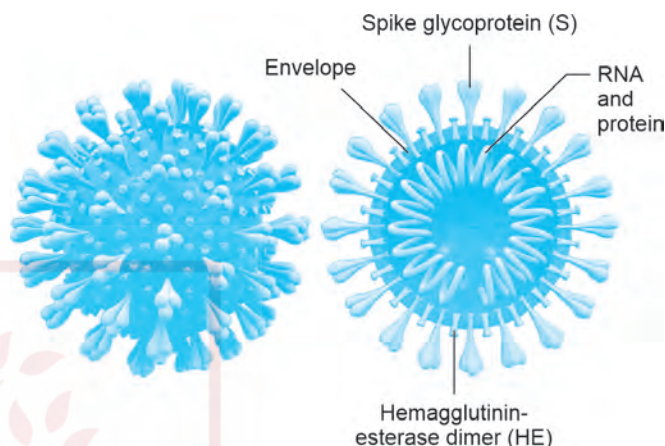
These are the activities to strengthen the capacity and capability of country to manage efficiently all type of emergencies.

Infection Control Practices

Please refer to FON synopsis page number 42.

RECENT HIGH IMPACT VIRAL DISEASES

COVID



History and Origin of Coronaviruses

- The outbreak of Novel coronavirus disease (COVID-19) was initially noticed in a seafood market in **Wuhan city in Hubei Province of China** in mid-December, 2019.
- A pneumonia of unknown cause detected in Wuhan, China was first reported to the WHO Country Office in China on 31 December 2019.
- The outbreak was declared a “Public Health Emergency of International Concern” by WHO on 30 January 2020.
- WHO declared COVID-19 a pandemic on 11th March, 2020.
- The first case of COVID-19 in India was reported from Kerala.

Definition of COVID-19 Case

- **Confirmed Case:** A person with laboratory confirmation of COVID-19 infection, irrespective of clinical signs and symptoms.

Viral Structure

- The coronaviruses are made up of four structural proteins, namely, the spike (S), membrane (M), envelop (E) and nucleocapsid (N) proteins.
- The spike (S) protein is protruding from the viral surface and is the most important for host attachment and penetration.

Epidemiology

- Current available evidence for COVID-19 suggests that the causative virus (SARS-CoV-2) has a zoonotic source closely related to **bat-origin SARS-like coronavirus**.
- The severe acute respiratory syndrome (SARS) coronavirus-2 is a novel coronavirus belonging to the family Coronaviridae.
- It is an **enveloped RNA beta coronavirus** related to the Severe Acute Respiratory Syndrome (SARS) virus.
- The virus has been shown to use the angiotensin-converting enzyme 2 (ACE2) receptor for cell entry.
- **Source of infection:** The persons infected by the novel coronavirus are the main source of infection.

“Man needs difficulties; they are necessary for health.”

—Carl Jung



MULTIPLE CHOICE QUESTIONS

(Including Explained and Practice Questions)

CONCEPTS AND DETERMINANTS OF HEALTH & WELL-BEING

1. **Quality and quantity of an individual's inter-personal ties and extent of involvement with the community is known as:** (AIIMS BPL NO 2018)

- Mental dimension of health
- Physical dimension of health
- Spiritual dimension of health
- Social dimension of health

Explanation: Social dimension is related to social well-being that creates integration and adjustment with the individual and community. Mainly it is defined as quality and quantity of an individual's inter-personal ties and extent of involvement with the community.

2. **The functions of community are:** (AIIMS Raipur Grade II 2017)

- It provides space for socializing and recreation
 - It provides safety and security
 - Socialization and Education for its members
 - Provides opportunity for interaction among members
- a, b, c
 - b, c, d
 - a, c, d
 - a, b, c, d

Explanation: The functions of community include socialization, social control, social participation and mutual support

3. **Ageism is characterized by:**

- Denial of negative stereotypes regarding aging
- Positive attitude towards the elderly based on age
- Negative attitude towards the elderly based on age
- Negative attitude towards the elderly based on physical disability

4. **Entomology is the science that studies:** (RRB SSNE 2015)

- Behavior of human beings
- Insects
- Behavior of ants
- Formation of rocks

5. **Headquarters of World Health Organization (WHO) is situated at:**

- New York, United States of America
- London, England
- Geneva, Switzerland
- Paris, France

6. **The concept of health which emphasizes that health is a 'sound mind in a sound body in a sound family in a sound environment' is:** (AIIMS Bhopal Grade-I 2018)

- Ecological concept
- Physical concept
- Psychological concept
- Holistic concept

Explanation: The health has been described by various scientists according to their concept of viewing the health. The ecologist viewed health as a harmonious equilibrium between man and environment. The physical concept of health describes health as a state of well-functioning of the body and psychological concept describes health as absence of mental illness. The Holistic concept of health is viewed as a multidimensional process involving well-being of the whole person in the context of his environment.

7. **The World Health Day is observed on:**

- 7th April
- 4th May
- 17th August
- 1st December

Explanation: The World Health Organization observes World Health Day on 7th of April every year.

8. **The subjective component of well-being is referred to as:**

- Physical quality of life
- Quality of work
- Quality of life
- Standard of living

Explanation: Subjective well-being is called quality of life.

9. **Health means absence of disease is the concept of:**

- Biomedical
- Ecology
- Holistic
- Psychosocial

Explanation: Health means absence of disease is the biomedical concept.

10. **What is the theme for 2016 World Health Day?**

- Halt the rise: Beat diabetes
- Food safety
- Vector-borne diseases: Small bite, big threat
- Healthy heart beat, Healthy blood pressure

Explanation:

- 2022: Health promotion for well being, equity and sustainable development
- 2021: Building a fairer, healthier world
- 2020: Support nurses and midwives
- 2019: Universal health coverage everyone everywhere
- 2018: Universal health coverage everyone everywhere
- 2017: Depression, let's task
- 2016: Halt the rise: Beat diabetes
- 2015: Food safety
- 2014: Vector-borne diseases: Small bite, big threat
- 2013: Healthy heart beat, Healthy blood pressure

11. **Forerunner of modern public health is:** (JIPMER 2012)

- Phoebe
- Nightingale
- Serelette
- Louis Pasteur

Ans.

- d
- d
- c
- b
- c
- d
- a
- c
- a
- a
- d

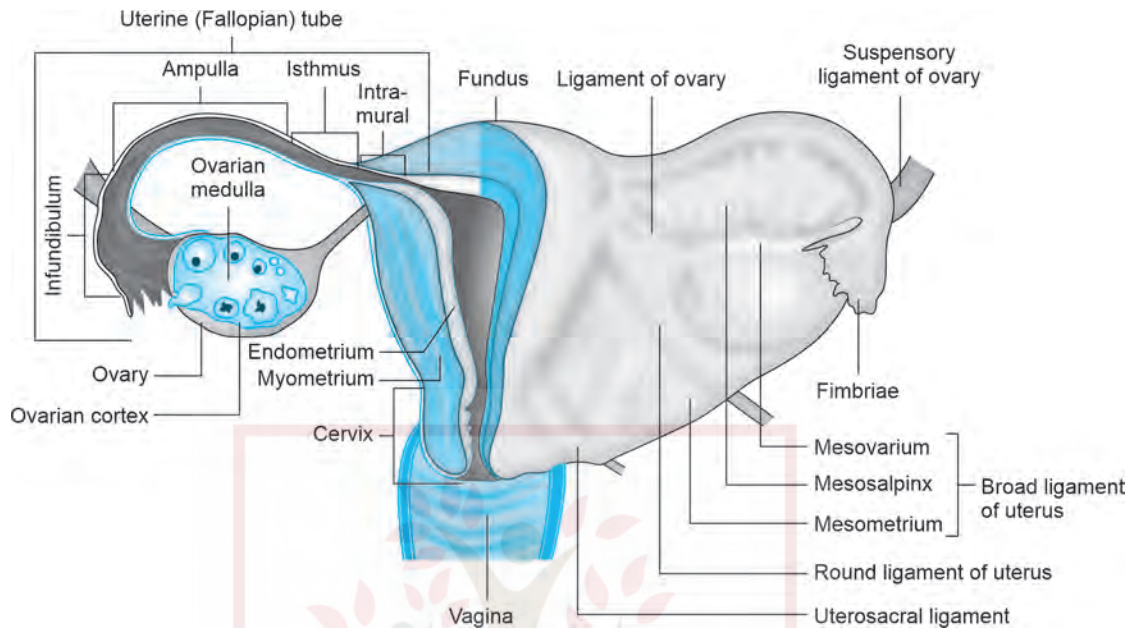


Figure 2: Anatomy of uterus and fallopian tube

Uterus

Anatomy of Uterus

- Uterus is a pear-shaped childbearing organ located in lesser pelvis.
- **Position:** Anteverted and Anteflexed.
- **Measurements:**
 - **Length:** 3 inches (8 cm).
 - **Breadth (at fundus):** 2 inches (5 cm).
 - **Thickness:** 1 inch (1.25 cm).
 - **Weight:** 50–80 g
- Uterine wall is composed of three layers:
 - **Perimetrium:** Outermost serous layer.
 - **Myometrium:** Middle layer
 - **Endometrium:** Innermost mucosal lining of uterine cavity. Thickness changes during menstrual cycle.
- The uterus is divided into two main parts:
 - The body is the large upper 2/3rd pear-shaped part.
 - The cervix is the small lower 1/3rd cylindrical part.
 - The junction between the body and cervix is called isthmus.
 - The uterine tubes are attached to the upper part of the body. The point of fusion between the uterine tube and body is called **cornu of the uterus**.
 - **Ligaments supporting uterus (primary support):** Round ligament, uterosacral, transverse cervical, pubocervical.

Fallopian Tubes (Uterine Tubes)

- **Fallopian (uterine) tubes** are approximately 10 cm (usually 7–12 cm) in length, connecting the ovaries to the uterus.
- Ova (egg cells) are carried to the uterus through the fallopian tubes following ovulation. Ampullary part of the tube is the site of fertilization of ova with sperm.
- **Fallopian tubes are divided into four parts**
 - **Interstitial portion (Intramural part):** 1.25 cm long and lies within the wall of the uterus. Its lumen is 1 mm wide.
 - **Isthmus (adjoins uterus):** Extends for 3–4 cm from the uterus.

- **Ampulla (central portion):** Wider portion where fertilization usually occurs. It is 5 cm long. Ampulla is the largest and longest portion of the tube.
- **Infundibulum:** Funnel shaped lateral end of the fallopian tube that overlies the ovary. Several finger-like processes elongated to edge of the infundibulum are known as fimbriae.

Accessory Reproduction Organs

Anatomy of Breast

- The mammary glands, or breasts, are actually modified sebaceous glands.
- Mammary glands are the example of apocrine gland.
- It is made up of 15–20 lobules of glandular tissue embedded in fat.
- Each lobule drains by its **lactiferous duct** on to the **nipple**.
- The pigmented area surrounding nipple is known as **areola**.
- **Montgomery tubercles** are small glands around the nipples on the areola.
- **Blood supply:** Axillary artery, Internal thoracic (Internal Mammary) artery, Intercostal artery.

MENSTRUAL CYCLE

- **Menstruation:** Discharge of bloody fluid containing endometrial cells, glandular secretions and blood cells, lasts for 3–5 days.
- **Average length of a menstrual cycle:** 28 days, but varies from 21–35 days with shorter and longer cycles
- **Menarche:** A woman's first menstruation; typically occurs around age 12.
- **Menopause:** End of a woman's reproductive phase, commonly occurs between ages 45 and 55
- Menstrual cycle can be divided into 3 phases:
 - **Menstrual phase (1st to 4th day).**
 - Endometrium becomes very thin, but due to low estrogen levels, hypophysis secretes more FSH.
 - FSH stimulates secretion of estrogen which serves as proliferation a signal to the endometrial basal layer.



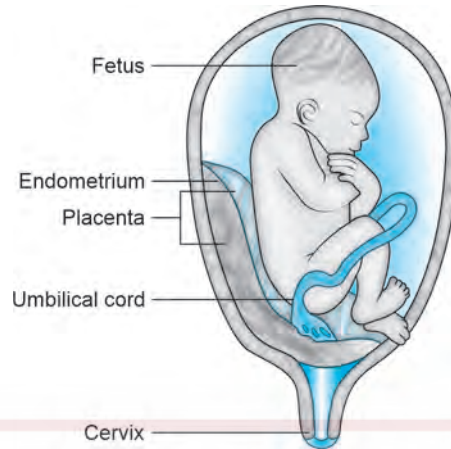


Figure 13: Placenta previa

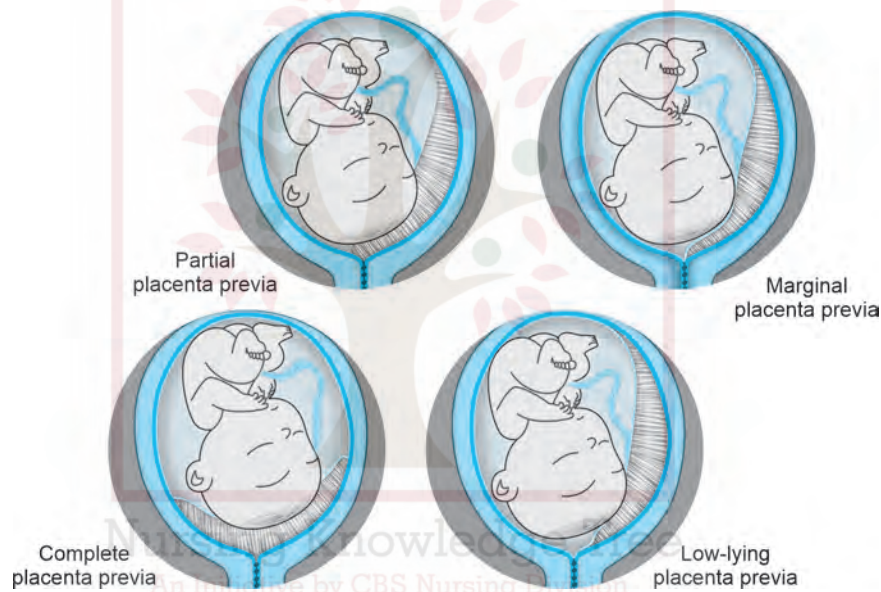


Figure 14: Types of placenta previa

- There are four types of placenta previa:
 - **Low-lying:** Placenta implanted in the lower segment of uterus but does not reach (cover) the cervical os. Vaginal birth is possible.
 - **Marginal:** Border of the placenta touches (approaches) the cervical os. Vaginal birth is normally safe.
 - **Partial:** The placenta only partially obstructs cervical os. Vaginal birth is still possible mostly CS is preferred for partial type.
 - **Complete:** Implantation totally covers the cervical os. Cesarean section is usually recommended.
- **Signs and symptoms:** Pain, bright red bleeding, soft uterus, anemia, uterine contractions. Painless bleeding is associated with placenta previa.
- **Treatment:** For minimal to no bleeding, bedrest. For heavy bleeding, C-section may be recommended.
- **Types:** Concealed abruption, revealed abruption, mixed type.
- **Risk factors:** Increased age and parity; vascular diseases, Supine hypotensive syndrome, Smoking, cocaine use, uterine myoma.
- **Signs and symptoms:**
 - Vaginal bleeding accompanied with abdominal pain
 - Bloody amniotic fluid
 - Pallor skin, hypotension
 - Signs of shock.
- **Treatment:** Depends on gestational age. It ranges from symptomatic management to C-Section or vaginal delivery.

Abnormalities of Placenta and Cord

- **Placenta extrachorialis:** It has two types:
 - *Circumvallate placenta*
 - *Placenta marginata*
- **Placenta membranacea:** Unduly large and thin placenta.
- **Placenta bilobate:** Placenta with two equal sized discs
- **Multilobed placenta:** Placenta with three or more equal sized lobes.
- **Placenta fenestrated:** Placental disc has missing central portion.

Abruptio Placenta

- The separation of the placenta from its site of implantation after 20 weeks of gestation or during the course of delivery.



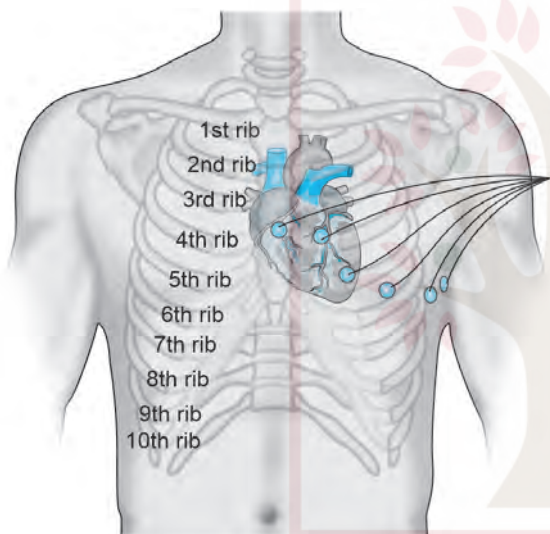
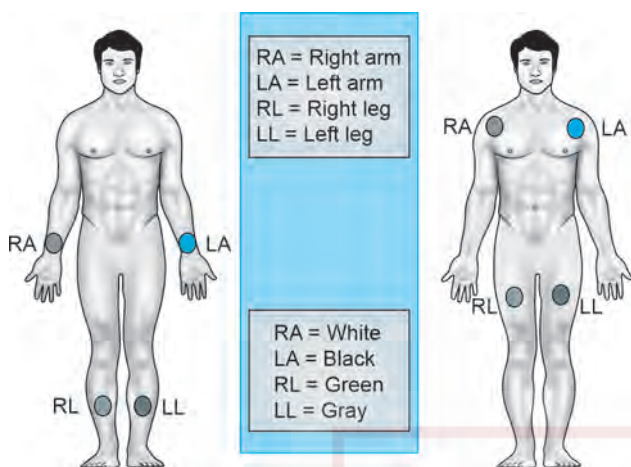


Figure 6: Placement of electrodes and leads

Table 16: ECG reading and cardiac activity

ECG reading	Normal duration	Cardiac activity
P wave	0.11 sec	Atrial depolarization
QRS complex	0.08–0.12 sec	Ventricular depolarization
T wave		Ventricular repolarization
ST segment		Time during which ventricles are contracting and emptying
PR interval	0.12–0.20 sec	AV Nodal delay

Note

Calculation of heart rate using ECG

- Rate = 300/No. of large square between consecutive R wave

Table 17: Interpretation of changes in ECG

Changes in ECG	Related conditions
Prominent U waves	Hypokalemia (Decreased serum potassium)
Peaked T wave or	Hyperkalemia (Increased serum potassium)
Widening of QRS	Hyperkalemia or tricyclic antidepressant poisoning
Hyperacute T waves (usually precedes ST segment elevation)	Coronary artery occlusion (Acute myocardial infarction)
ST segment elevation	Myocardial ischemia or infarction
Prolonged QT interval	Hypocalcemia
Shortened QT interval	Hypercalcemia, hyperkalemia
Flattened or inverted T waves	Hypokalemia, coronary ischemia

Normal ECG Pattern

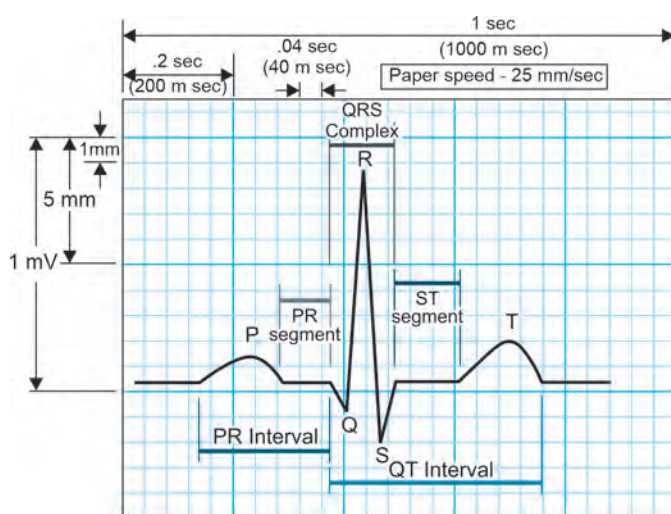


Figure 7: Normal ECG pattern

Glucose-6-Phosphate Dehydrogenase (G6PD) Deficiency

- It is an X-linked recessive disorder.
- In G6PD deficiency, client has inherited a defective enzyme which causes hemolysis of the RBC.
- It most commonly **affects male** whereas majority of the females are carrier.
- **Dark tea-colored urine** is the characteristic feature.

Thrombocytopenia

- Decreased Platelet count
- **Manifestation:** Bleeding and petechiae are common.
- **Diagnosis:** Bone marrow aspiration and biopsy

Von Willebrand Disease

- Condition occurs due to deficiency of Von Willebrand factor which is necessary for factor VIII activity.



Golden Points to Remember

- **Dehiscence** is the separation and disruption of previously joined wound edges.
- Phagocytosis is also known as opsonization. This is used to neutralize foreign molecules.
- **Increased Erythrocyte Sedimentation Rate (ESR)** indicates inflammatory process.
- **Eosinophilic response** is seen in allergy, parasitic infection and cancer.
- The **inflammatory/exudative phase of wound healing** is from onset of wound (day 1 to day 4).
- Blood vessels constrict to restrict the blood flow during **hemostasis stage** of wound healing.
- Increased capillary permeability and blood flow to the site of injury occur during **inflammatory phase** of wound healing.
- **Surgical wound** is an example of **healing with primary intention**.
- Lacerated wounds, pressure ulcers and traumatic injuries are the examples of **healing with secondary intention**.
- Healthy granulation tissue is pink or red and uneven in texture.
- Dark granulation tissue can be a sign of poor perfusion or infection.
- **Position change every 2 hours** is the most effective method of prevention of pressure ulcer in a bedridden patient.
- **Norton or Braden scales** are valid risk assessment tools for the assessment of pressure ulcers.
- **Waterlow scale or score** is used for risk assessment for pressure ulcer.
- Gangrene is a type of tissue death due to lack of blood supply and oxygen.
- Dry gangrene mostly affects limbs.
- Moist gangrene mostly affects bowel.
- **IgE** is associated with allergic reactions.
- **IgG** is the most abundant immunoglobulin (75%), found in all body fluids (Remember G-greatest).
- **IgM** is the largest (size) immunoglobulin (Remember – M-Macro).
- Antibodies are produced by B lymphocytes. They function in the **humoral immunity**.
- T lymphocytes is associated with **cell mediated immunity**.
- Contact dermatitis occurs due to delayed hypersensitivity (Type IV) type of reaction.
- Administration of corticosteroids diminishes the activity of the immune system, so they may mask some usual symptoms of infection.
- The **cardinal signs** of inflammation include **redness, heat, pain, swelling and loss of function**.
- **Kaposi sarcoma** is a tumor caused by human herpes virus 8, it is commonly associated with human immunodeficiency virus.
- Drugs commonly used in **ART (Anti-Retroviral Therapy)** are Zidovudine (ZDV), Nevirapine and Stavudine.
- The average risk of HIV infection after needle stick injury to HIV-infected blood is 1 in 300.
- Persistent generalized lymphadenopathy is caused by HIV infection.
- **Osteoporosis** is the most prevalent bone disease in the world.
- Fracture of the distal radius is called **Colles' fracture**.
- Colles' fracture is commonly described as a **dinner fork deformity**.
- Tripod fracture is seen in Zygomatic bone.
- **Compartment syndrome** is a complication of fracture in this increased pressure within the myofascial compartment.
- **Osteoporosis** (porosity and brittleness of bone) is caused by deficiency of Vitamin D.
- Vitamin D Deficiency in adults leads to osteomalacia.
- **Cardinal symptoms of rickets** are craniotabes (thinning of skull bones), rachitic rosary (rib beading), pigeon breast (pectus carinatum), bowing of legs, waddling gait and short stature.
- **Rachitic rosary** can be frequently seen in Rickets. It is a classic beading of osteochondral junction of ribs.
- **Carpopedal spasm** indicates hypocalcemia.
- An injury to the joint ligament and joint capsule is termed as **sprain**.
- The largest synovial joint in the human body is **knee joint**.
- Significant elevation of ESR and C Reactive Protein (CRP) is seen during actual phase of Rheumatoid Arthritis (RA).
- Carpal tunnel syndrome is caused by the compression of the **median nerve**.
- Cubital tunnel syndrome occurs when the **ulnar nerve** in the arm becomes compressed or irritated.
- Provide a **diet high in protein and vitamin C** to the patient with fracture.
- Nurse should stand on the affected side while **ambulating the client**.
- **Gout** is a syndrome of acute attacks of arthritis caused by **hyperuricemia**.
- Incidence of **primary gout** is more among men than in women.
- Allopurinol is a drug of choice to treat **chronic gout** or prevention of gout.
- **Colchicine** is used to treat acute gout attack.
- Limited intake of purine-rich food (e.g., liver and sardines) is advised for the patient with gout.
- **Gout** most classically affects the joint in the base of the big toe.
- Osteoarthritis most commonly affects weight-bearing joints, for example, hip, knee, lower vertebral column.
- Osteoarthritis is the most common type of arthritis.
- Rheumatoid arthritis is the most common cause of **Swan Neck Deformity** of fingers.
- **Scoliosis** is a lateral curvature of the spine.
- Kyphosis is outward curvature of the thoracic spine. It is also known as **humpback**.
- Lordosis is inward curvature of the lumbar spine.



“When you are sick of your sickness, you are no longer sick.”
—Chinese Proverb



MULTIPLE CHOICE QUESTIONS

(Including Explained and Practice Questions)

INFLAMMATION AND WOUND HEALING

1. An opening of surgical wound edges is called:
- Wound evisceration
 - Wound rupture
 - Wound approximation
 - Wound dehiscence

Explanation:

- Wound dehiscence is a surgical complication in which a wound ruptures along a surgical incision. It may be due to too tight suturing or loose improper suturing, sneezing, and coughing.
- Wound evisceration is a process in which a surgical incision opens (dehiscence) and the abdominal organs protrude or come out of the incision.

2. Diffused, purulent inflammation of a tissue is called:
- Abscess
 - Cellulitis
 - Boils
 - Ulcers

Explanation:

- Cellulitis is a bacterial infection of underlying layers of the skin and the site of infection turns red with swelling and pain. It can be purulent (presence of pus) or non-purulent.
- Key point:** Cellulitis is diffused whereas abscess is localized.

3. Severe, generalized edema is called:
- Myxedema
 - Pitting edema
 - Anasarca
 - Dependent edema

Explanation:

- When Edema is massive and generalized, it is called anasarca. It is caused by a variety of clinical conditions like heart failure, renal failure, liver failure, or problems with the lymphatic system.
- The swelling is mainly caused by abnormal retention of body fluids in extracellular space and body tissues. Due to this, Anasarca is also known as dropsy, massive edema or generalized edema. The inflammation is widespread throughout the whole body.

4. Which of the following is a substance that decreases pain transmission and causes an inflammatory response?
- Substance P
 - Endorphin
 - Prostaglandin
 - Histamine
5. Surgically creating an opening into an organ or space in the body by a sharp instrument is known as:
- Laceration
 - Abrasion
 - Puncture
 - Incision
6. Which of the following is in the blood clot that helps hold the wound together during hemostasis phase of wound healing?
- Granulation
 - Neutrophil
 - Fibrin
 - Leukocytes

7. Soft, pink, fleshy projections consisting of capillaries surrounded by fibrous collagen:

- Keloid
- Granulation tissue
- Cellulitis
- Collagen

8. The dressings over closed wound are usually removed on the:

- Day after surgery
- Next of surgery
- On the third day
- When the doctor gives the order

9. Removal of nonviable tissue from an open wound to promote healing is known as:

- Debridement
- Dressing
- Cleansing
- Excision

10. In order to cease bleeding from an open wound, indirect pressure is applied to the affected artery which is:

- Distal to the wound
- Proximal to the wound
- Lateral to the wound
- Medial to the wound

IMMUNE SYSTEM

11. Immediate treatment of Anaphylaxis is:

- Adrenaline
- Benzyl penicillin
- Hydrocortisone
- Atropine

Explanation: Adrenaline or epinephrine is the immediate treatment of anaphylaxis. It will stimulate the alpha adrenoceptors and thereby it increases peripheral vascular resistance that leads to the improvement of blood pressure, reversing of peripheral vasodilation, coronary perfusion and it decreases angioedema.

12. Identify autoimmune diseases among the following:

- SLE
- Grave's disease
- Myasthenia gravis
- All of these

13. Delayed hypersensitivity reaction can be managed with:

- Adrenaline
- Dopamine
- IV fluid
- Corticosteroids

14. Corticosteroid suppresses the function of:

- Sympathetic response
- Parasympathetic
- Immune response
- Cardiac system

15. Secondary immunodeficiency is most commonly due to:

- Drugs
- Anxiety
- Malnutrition
- Infection

16. Strawberry tongue is seen in:

- PAN
- Kawasaki disease
- MPA
- Wegener's

Ans.

- d
- b
- c
- b
- d
- c
- b
- c
- a
- b
- a
- d
- d
- c
- a
- b

CHAPTER 8

PSYCHIATRIC NURSING



SYNOPSIS

INTRODUCTION

- Mental health is an equilibrium of body, mind and spirit with the environment.
- In **1943**, mental health nursing course was first started for male nurses in India.
- In **1976**, MSc in Psychiatric Nursing was first started at RAK College of Nursing, New Delhi.

MENTAL ILLNESS

Mental illness is maladjustment in living. It produces a disharmony in the person's ability to meet human needs comfortably or effectively and to function within a culture.

Mental Healthcare Act 2017

- The Indian **Mental Healthcare Act 2017** replaced the Mental Health Act 1987.

- Mental Healthcare Act **2017** (MHA 2017) received presidential consent on April 7th, 2017 and replaced the 1987 Act.

Salient Features of MHA 2017

- **Decriminalization of suicide attempt:** This act has overturned **309 Indian Penal Code**. The MHA 2017 decriminalizes suicide attempt by mentally ill person.
- **Rights of persons with mental illness**
 - Every person will have the right to access mental healthcare services.
 - Protect person with mentally ill from inhuman treatment.
 - Mentally ill patients to have access to free legal services and right to complain about shortcoming of provision of treatment.
 - **Advance directive:** Empowers a mentally ill person to have the right to make an advance directive toward the way he/she wants to be treated.
- **No electroconvulsive therapy (ECT)** therapy without use of muscle relaxants.
- **No ECT** therapy for minors.

THEORIES OF PERSONALITY DEVELOPMENT

Freud's Stages of Psychosexual Development

Table 1: Freud's stages of psychosexual development

Stages of development	Main characteristics
Oral (Birth to 18 months)	Focus of libido is on mouth, tongue and lips Pleasure centers on mouth—sucking, biting, chewing
Anal (18 months to 3 years)	Pleasure focuses on bowel and bladder Elimination and toilet training are central focus
Phallic (3–6 years)	Awareness of genital area as source of pleasure Child learns sexual identity The development of Electra complex (female) and Oedipus complex (male) occurs during this stage of development. In this, child develops unconscious desire to eliminate the parent of the same sex and to possess the parent of the opposite sex
Latency (6–12 years)	Quite stage in sexual development Child learns to socialize
Genital (12 years to adulthood)	The genitals are again the focus of stimulation Sexual maturity and satisfactory relationships with opposite sex are the central focus points.

“To keep the body in good health is a duty... otherwise we shall not be able to keep our mind strong and clear.”
—Buddha



MULTIPLE CHOICE QUESTIONS

(Including Explained and Practice Questions)

HISTORY OF PSYCHIATRIC NURSING AND GENERAL PSYCHOPATHOLOGY

1. Assuming the all members of a group are alike is called:
- Cultural imposition
 - Cultural competency
 - Clustering
 - Stereotyping

Explanation: A stereotype is a belief that all members of a certain group act and think in the same fashion.

2. Services aimed at reducing the prevalence of psychiatric illness by shortening the course of the illness are called:
- Secondary prevention
 - Primary prevention
 - Tertiary prevention
 - Primordial prevention

Explanation: Disease prevention includes measures not only to prevent the occurrence of disease (primary level prevention—reduce risk, immunization) but also to arrest its progress (secondary level prevention—early diagnosis and prompt treatment) and reduce its consequences once established (tertiary level prevention—rehabilitations).

3. Presenting the patient with a “hypothetical situation” helps in the assessment of:
- Abstractability
 - Insight
 - Comprehension
 - Judgment

Explanation: Judgment involves ability to understand the facts and draw conclusions. Judgment can be evaluated by exploring the patient’s involvement in hypothetical situations, relationships and vocational choices by the use of situational judgment test.

4. Temporary loss of muscle tone and weakness precipitated by a variety of emotional states is called:
- Cataplexy
 - Catharsis
 - Compulsion
 - Confabulation
5. A state of diminished consciousness in which the patient remains mute and still with the eyes open is known as:
- Catatonia
 - Stupor
 - Panic
 - Hysteria

Explanation: Catatonia is a state of psychomotor immobility and behavioral abnormality manifested by stupor. Panic is a sudden, strong feeling of anxiety or fear that prevents reasonable thought and actions and may spread to influence many people. Hysteria is exaggerated or uncontrollable emotion or excitement.

6. When a patient is not aware of his/her mental illness, it is called:
- Disorientation
 - Lack of insight
 - Unconsciousness
 - Lack of concentration

Explanation:

- Disorientation:** Cognitive disability in which person is not aware about time, place and person
- Lack of insight:** Also known as anosognosia in which person is not aware about his or her own mental illness.

7. Who is the first psychiatric nurse?

- Hildegard Peplau
- Linda Richards
- Sigmund Freud
- Jean Watson

Explanation: Linda Richards (July 27, 1841–April 16, 1930) was the first professionally trained American nurse.

8. What is total score in Mini-Mental Status Examination (MMSE)?

- 25
- 30
- 32
- 35

Explanation: Total score of mini-mental status examination is 30 and is divide among the following categories such as orientation, registration, attention and calculation, recall and language.

9. Which of the following is NOT a type of conflict?

- Intrapersonal
- Manifest
- Interpersonal
- Intragroup

Explanation: Interpersonal, intrapersonal, intergroup and intragroup are the different type of conflicts.

10. Abnormal drowsiness in the daytime is known as

- Narcolepsy
- Somnolence
- Somnambulism
- Sleep ataxia

Explanation: One of the most prominent symptoms of narcolepsy is excessive daytime sleepiness. People with narcolepsy feel moderately or severely tired during the day.

11. The person is able to speak only in whisper:

- Aphonia
- Mutism
- Aphasia
- Stupor

Explanation: Aphonia is the inability to produce voiced sound.

12. If the activities done by the people are repeated by a patient, it is known as:

- Echolalia
- Hyperactivity
- Compulsion
- Echopraxia

13. The parrot-like repetition of words spoken by others is known as:

- Enmeshment
- Echopraxia
- Echolalia
- Neologism



Ans.

- d
- a
- d
- a
- b
- b
- b
- b
- b
- a
- a
- d
- c



SYNOPSIS

CARBOHYDRATES

- Carbohydrates are the most abundant biological molecules containing carbon (C), hydrogen (H) and oxygen (O) molecules.
- Energy produced from carbohydrates is 4 kcal/g.

Classification

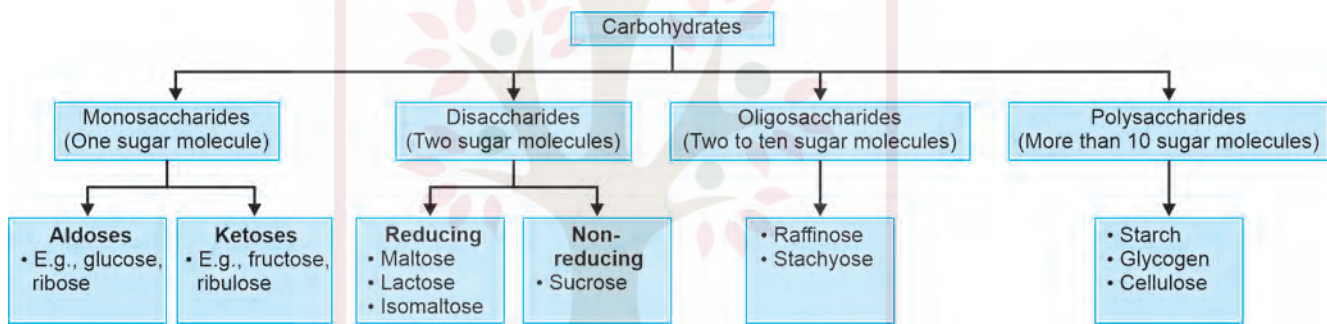


Figure 1: Classification of carbohydrates

- Glucose (dextrose), galactose (constituent of lactose) and fructose are known as **hexoses**.
- **Disaccharides consist of two monosaccharides.**
 - Sucrose (Cane sugar): D-Glucose + D-Fructose
 - Maltose = D-Glucose + D-Glucose
 - Lactose (**Milk sugar**) = D-Galactose + D-Glucose
- **Polysaccharides**
 - Starch is stored as reservoir of food in cereals and tubers in **plant**.
 - Starch consists of two polysaccharide units, i.e., amylose and amylopectin.
 - **Glycogen (animal starch)** is found in animals.
 - **Cellulose** is a component of cell wall of plants.

Uses of Carbohydrates

- Carbohydrates are the main sources of energy in the body.
- Brain cells and RBCs are entirely dependent on glucose, an energy source.
- Stored as glycogen in animals and as starch in plants.
- Glycoproteins and glycolipids are components of cell membranes and receptors.

Carbohydrate Metabolism

Glycolysis (Embden-Meyerhof-Parnas Pathway)

- Glycolysis is the process of breakdown of glucose into pyruvic acid (aerobic glycolysis) or lactate (anaerobic glycolysis).
- Glycolysis produces 2 ATP, 2 NADH, and 2 pyruvate molecules.

Gluconeogenesis

- Process of formation of glucose from non-carbohydrate sources such as glucogenic amino acids, glycerol, lactate, etc.
- Gluconeogenesis takes place in fasting state, thus enables maintenance of blood glucose.
- Does not take place in muscle.

TCA Cycle (Tricarboxylic Acid Cycle)

- Also called Citric acid cycle or Krebs cycle.
- **Total ATP yield is 12 ATP** per molecule of acetyl-CoA.

Glycogenesis

- Process of conversion of glucose to glycogen.
- Glycogenesis is stimulated by insulin.

“Ill-health of body or of mind, is defeat. Health alone is victory.”

—Thomas Carlyle



MULTIPLE CHOICE QUESTIONS

(Including Explained and Practice Questions)

- Building block of protein is:**
 - Glucose
 - Lipids
 - Fatty acids
 - Amino acids
- Absorption of dietary Iron is enhanced by:**
 - Dietary fibers
 - Tea
 - Vitamin C
 - Calcium
- The pathway through which a cell produces the maximum number of ATP molecules is:**
 - Pentose phosphate pathway
 - Glycolysis
 - Lactic acid fermentation
 - TCA cycle

Explanation: TCA cycle produces 38 ATP (34 ATP from oxidative phosphorylation + 4 ATP from substrate level phosphorylation).

- Ketone bodies are synthesized from:**
 - Acetyl CoA
 - Cholesterol
 - Phospholipids
 - Triglycerides

Explanation: Ketogenesis is the biochemical process through which organisms produce ketone bodies through breakdown of fatty acids and ketogenic amino acids. The 3 ketone bodies, each synthesized from Acetyl-CoA molecules are acetoacetate, acetone, and β -hydroxybutyrate.

- How many calories are there in one gram of fat?**
 - 4
 - 12
 - 8
 - 9
- Highest energy yielding food group is:**
 - Carbohydrates
 - Fats
 - Sugars
 - Protein

Explanation:

Food group	Calories/gram
Fats	9
Carbohydrate (sugars)	4
Protein	4

- Synthesis of glucose from noncarbohydrate source is referred to as:**
 - Glycolysis
 - Gluconeogenesis
 - Glycogenolysis
 - Glycogenesis
- BMI greater than 30 is considered as:**
 - Overweight
 - Bulimia
 - Obese
 - Stout
- Vitamin B1 is also known as:**
 - Niacin
 - Thiamine
 - Riboflavin
 - Pyridoxine

- Which one of the following vitamins help in wound healing?**
 - Vitamin A
 - Vitamin B
 - Vitamin C
 - Vitamin D
- Which one of the following sugar concentration is highest in honey?**
 - Lactose
 - Maltose
 - Glucose
 - Fructose
- Deficiency of which vitamin causes scurvy?**
 - Vitamin A
 - Vitamin B
 - Vitamin D
 - Vitamin C
- How many calories does 1 gm of fat give?**
 - 4
 - 8
 - 10
 - 9
- The mineral element which is essential for synthesis of thyroxin is:**
 - Sodium
 - Iron
 - Iodine
 - Chloride
- Vitamin E is otherwise known as:**
 - Retinoic acid
 - Tocopherol
 - Calciferol
 - Pantothenic acid
- Protein deficiency disease is known as:**
 - Gaucher's disease
 - Kwashiorkor
 - Cushing's disease
 - None of these
- Vitamin 'D' deficiency may result in:**
 - Rickets
 - Night blindness
 - Beriberi
 - Scurvy
- Prevention of Food Adulteration Act was initiated in the year:**
 - 1952
 - 1954
 - 1958
 - 1960
- National Nutritional Policy functions under the department of:**
 - Department of Women and Child Development
 - Department of Health and Family Welfare
 - Home affairs
 - All of the above
- Which one of the following is not a micronutrient?**
 - Iodine
 - Iron
 - Vitamins
 - Protein
- Lactose is made up of:**
 - Fructose
 - Glucose
 - Galactose
 - Glucose and galactose
- Calorific value of carbohydrates is:**
 - 4 kcal/gram
 - 9 kcal/gram
 - 5 kcal/gram
 - None of these
- PUFAs are mostly found in:**
 - Vegetable oils
 - Animal foods
 - Butter
 - Ghee
- Food energy is measured in:**
 - Kilocalories
 - Proteins
 - Grams
 - None of these



Ans.

- d
- c
- d
- a
- d
- b
- b
- c
- b
- c
- d
- d
- d
- c
- b
- b
- a
- b
- a
- d
- d
- a
- a
- a
- a

NURSING RESEARCH AND STATISTICS



MULTIPLE CHOICE QUESTIONS (Including Explained and Practice Questions)

1. Longitudinal research deals with
 - a. Long term research
 - b. Short term research
 - c. Cross sectional studies
 - d. Retrospective studies
2. After reading a research article nurse utilise the findings of the research here the nurse is
 - a. Primary Investigator
 - b. Secondary investigator
 - c. Consumer
 - d. Criticizers
3. Among the following Research design which one has some control by the researcher?
 - a. Experimental
 - b. Quasi experimental
 - c. Non experimental
 - d. Cross sectional
4. Among the following research designs which one costs more controlled by the researcher
 - a. Experimental
 - b. Quasi experimental
 - c. Non experimental
 - d. Cross sectional
5. Applied research are conducted in which among the following settings?
 - a. Natural
 - b. Laboratory
 - c. Simulated
 - d. Controlled environment
6. Problem identification in nursing research is equivalent to which step of nursing process?
 - a. Nursing diagnosis
 - b. Implementation
 - c. Goal identification
 - d. Evaluation
7. Which among the following research steps is equivalent to planning in problem solving approach?
 - a. Problem identification
 - b. Research design
 - c. Review of literature
 - d. Data collection
8. Feasibility of the research study is determined by which among the following factors?
 - a. Researcher's credentials
 - b. Significance of the problem
 - c. Previous studies done in the area
 - d. Availability of the subject
9. In a given set of values the most frequently occurred value is known as
 - a. Mean
 - b. Median
 - c. Mode
 - d. Standard deviation
10. Who is the first nurse researcher?
 - a. Martha Rogers
 - b. Dorothea Orem
 - c. Florence Nightingale
 - d. Sr Callista Roy
11. Subset of a population is called as:
 - a. Study population
 - b. Target population
 - c. Sample
 - d. Unit
12. Number of existing cases of a disease during a given time interval gives:
 - a. Point prevalence
 - b. Incidence
 - c. Period prevalence
 - d. None of these
13. The number of new cases that occur within a specific population within a defined time interval is:
 - a. Incidence
 - b. Point Prevalence
 - c. Period prevalence
 - d. Lifetime Prevalence
14. The first step of the Research Process is to:
 - a. Prepare the research design
 - b. Complete data collection and analysis
 - c. Formulate the research questions
 - d. Prepare the report
15. Theory of theory is termed:
 - a. Grand theory
 - b. Meta theory
 - c. Systematic theory
 - d. Middle range theory
16. A small-scale trial run of a research study is referred to as:
 - a. Minor project
 - b. Pilot study
 - c. Miniature study
 - d. Sample study
17. The most important source for identification of a research problem is:
 - a. Nursing practice
 - b. Nursing practice guidelines and protocols
 - c. Nursing textbooks
 - d. Nursing code of ethics
18. The variable in an experiment that is known from the start and does not change is called:
 - a. Dependent variable
 - b. Extraneous variable
 - c. Independent variable
 - d. Confounding variable
19. The variable which is influenced by the intervention of the researcher is called:
 - a. Independent
 - b. Dependent
 - c. Discrete
 - d. Extraneous
20. Variable that is irrelevant in an investigation and needs to be controlled is called:
 - a. Indirect variable
 - b. Active variable
 - c. Dependent variable
 - d. Extraneous variable
21. Statement of the expected relationship between two or more variables is known as the:
 - a. Assumption
 - b. Hypothesis
 - c. Problem statement
 - d. Research question
22. A blueprint for the conduction of study is:

(Daman & Diu NO 2018)

 - a. Pilot study
 - b. Research hypothesis
 - c. Research design
 - d. Data collection tool



Ans.

1. a
2. c
3. b
4. a
5. a
6. a
7. b
8. d
9. c
10. c
11. c
12. c
13. a
14. c
15. b
16. b
17. a
18. c
19. b
20. d
21. b
22. c

Explanation: A research design is a framework or blueprint for conducting the research. It specifies the details of the procedures necessary for obtaining the information.

CHAPTER 12

NURSING ADMINISTRATION AND EDUCATION



MULTIPLE CHOICE QUESTIONS (Including Explained and Practice Questions)

1. The nurse leans toward the patient in the communication to:

- a. Maintain eye contact
- b. To comfort the patient
- c. Show genuine interest
- d. Show courtesy

2. Non-verbal communication includes:

- a. Phrases
- b. Gestures
- c. Information
- d. Words

3. The communication phase that is facilitated by knowledge of the patients is known as:

- a. Message heard
- b. Thinking of a message
- c. Decoding the message
- d. All of these

4. Health education by a nurse to a group of people can be termed as:

- a. Small group communication
- b. Interpersonal communication
- c. Intrapersonal communication
- d. Public communication

Explanation: Health education is an example of small group communication, where communication is between nurse and group of people.

5. Translating the message into verbal and non-verbal symbols to communicate the receiver means:

- a. Encoding
- b. Decoding
- c. Channel
- d. Feedback

Explanation: Encoding: The message is theoretical and intangible, its further passing requires use of certain symbols such as words, actions or pictures, etc. This process of conversion of message into the symbols is the process of encoding.

Decoding means interpretation. The receiver decodes the encoded message to understand the meaning of it.

6. Special words or expressions used by a profession or group that are difficult for others to understand are known as:

- a. Equivocal terms
- b. Jargon
- c. Technical terms
- d. Code language

7. Another name for interpersonal communication is:

- a. Mass communication
- b. Face to face public communication
- c. Dyadic communication
- d. Virtual reality

8. Who plays a proactive role in counseling?

- a. Counselee
- b. Counselor
- c. Administrator
- d. Referee

9. Listening in counseling is what process?

- a. Passive process
- b. Dual process
- c. Active process
- d. Lengthy process

10. The final step of directive counseling is:

- a. Prognosis
- b. Synthesis
- c. Follow-up
- d. Diagnosis

11. The test that is intended to measure the learnt knowledge and skill is:

- a. Aptitude test
- b. Achievement test
- c. Ability test
- d. Observation

12. Number of phases in counseling process is:

- a. 2-3
- b. 5
- c. 7
- d. 8

13. Counseling should be done by a:

- a. Teacher
- b. Parent
- c. A trained counselor
- d. Any of these

14. Guidance is provided by:

- a. Teachers
- b. Parents
- c. A trained guide
- d. Any experienced person

15. The best method to teach a patient any skills, such as using inhaler, is by:

- a. Lecture
- b. Demonstration
- c. Discussion
- d. Panel session

Explanation: The best method to teach a patient any skills, is by doing and showing the things. Demonstration is the process of performing the procedure the way teacher expects the learner to practice.

16. Andragogy refers to:

- a. Child learning
- b. Adult learning
- c. Learning by doing
- d. Practical learning

17. A principle of adult learning is:

- a. Learning is self-directed
- b. Learning by doing
- c. Learning by imposition
- d. Learning by imitation

18. The reproduction of the essential features of a real-life situation is called:

- a. Exhibition
- b. Module
- c. Simulation
- d. Demonstration

Explanation: A simulation is an approximate imitation of the operation of a process or system. The model is a well-defined description of the simulated subject, and represents its key characteristics. Simulation is one of the best methods to teach clinical skills for nursing students.

19. One form of graphic presentation for health education is:

- a. Notice board
- b. Charts
- c. Poster
- d. Blackboard



Ans.

- 1. c
- 2. b
- 3. c
- 4. a
- 5. a
- 6. b
- 7. c
- 8. a
- 9. c
- 10. c
- 11. b
- 12. b
- 13. c
- 14. d
- 15. b
- 16. b
- 17. a
- 18. c
- 19. b

Section B

Previous Year Papers

ANM Junior PHN 2022

- Health is viewed as a dynamic equilibrium between man and his environment:**
 - Biomedical concept
 - Ecological concept
 - Psychosocial concept
 - Holistic concept
- The efforts are directed toward discouraging children from adopting harmful life style is:**
 - Primordial prevention
 - Primary prevention
 - Secondary prevention
 - Tertiary prevention
- Mantoux test is used to determine the following disease:**
 - Diphtheria
 - Leprosy
 - Tuberculosis
 - Typhoid
- Rice water appearance of stool is seen in:**
 - Cholera
 - Amoebiasis
 - Giardiasis
 - Typhoid
- The fever ascends in a stepladder fashion is seen in:**
 - Tuberculosis
 - Meningitis
 - Malaria
 - Typhoid
- An eligible couple refers to currently married couple wherein the wife reproductive age, which generally assumed to lie between the age of:**
 - 18 and 25
 - 18 and 45
 - 15 and 25
 - 15 and 45
- The following are the characteristics of a community, except:**
 - The community is not a contagious geographic area
 - It is composed of people living together
 - People cooperate to satisfy their basic needs
 - There are common organizations in the community
- The process that can help people to understand better and deal with their problems and communicate better with those with whom they are emotionally involved is:**
 - Education
 - Motivation
 - Persuasion
 - Counseling
- The Child Marriage Restraint Act in India is an example of:**
 - Regulatory approach
 - Service approach
 - Health education approach
 - Primary healthcare approach
- The degree to which the message to be communicated is perceived as trustworthy by receiver:**
 - Reinforcement
 - Credibility
 - Comprehension
 - Motivation
- Koplik's spots are typical feature of:**
 - Chicken pox
 - Herpes zoster
 - Small pox
 - Measles
- An Accredited Social Health Activist (ASHA) for a population of:**
 - 400
 - 600
 - 800
 - 1000
- The policy reaffirms the commitment of the Government toward target-free approach in administering family planning services:**
 - National health policy
 - National population policy
 - National nutrition policy
 - National policy for children
- World Population Day is observed every year on:**
 - 11th July
 - 28th July
 - 5th June
 - 14th June
- A sub-center covers the population of:**
 - 2000-5000
 - 3000-5000
 - 10000-20000
 - 20000-30000
- The causative organism of mumps is:**
 - Paramyxovirus
 - Variola Virus
 - Varicella-Zoster Virus
 - Arbovirus
- For effective group discussion, the group should consist of the following number of Members:**
 - 2-5
 - 6-12
 - 10-20
 - 15-25
- Vitamin D deficiency causes:**
 - Rickets
 - Night blindness
 - Beriberi
 - Pellagra
- Following are larval control measures; except:**
 - DDT
 - Paris green
 - Gambusia fish
 - Intermittent irrigation
- Mosquitoes that breed in dirty water collection are:**
 - Anopheles
 - Culex
 - Aedes
 - Mansonia
- Richest source of Vitamin C is:**
 - Carrot
 - Milk
 - Amla
 - Green leafy vegetables
- More frequent form of protein energy malnutrition in India:**
 - Anemia
 - Xerophthalmia
 - Marasmus
 - Option a and c
- Characteristic of a mentally healthy person includes:**
 - Feels satisfied with himself
 - Well adjusted
 - Has good self-control
 - All of the above
- Which among the following is the cause of maladjustment?**
 - Frustration
 - Tension
 - Poverty
 - All of these



Ans.

- b
- a
- c
- a
- d
- d
- a
- d
- a
- b
- d
- d
- b
- a
- b
- a
- b
- a
- a
- b
- c
- c
- d
- d

MP NHM CHO 2021 (Set-1)



- The term Thrombocytopenia means:**
 - Weakness of platelet aggregation
 - Low platelet count
 - Increased platelet count
 - Normal platelet count
- The function of flame cell is:**
 - Excretion
 - Digestion
 - Respiration
 - Reproduction
- Which of the following is a bleeding disorder?**
 - Leukemia
 - Anemia
 - Hemophilia
 - Leukopenia
- Saliva contains an enzyme that acts upon which of the following nutrients?**
 - Protein
 - Fat
 - Starch
 - Minerals
- The rate of Drug absorption is greatest in the:**
 - Large intestine
 - Gallbladder
 - Small intestine
 - Stomach
- Which of the following bone is called Collarbone?**
 - Acetabulum
 - Pelvic
 - Scapula
 - Clavicle
- Which of the following is the master gland of the endocrine system?**
 - Pancreas
 - Pituitary
 - Thyroid
 - Adrenal
- Which of the following allows air to pass into the lungs?**
 - Aorta
 - Esophagus
 - Heart
 - Trachea
- The membrane that separates auditory canal from middle ear is?**
 - Eustachian tube
 - Labyrinth
 - Tympanic membrane
 - Pinna
- In the demographic cycle, high stationary stage is characterized by:**
 - High birth rate and a high death rate
 - The death rate begins to decline, while the birth rate remains unchanged
 - Death rate declines still further, and the birth rate tends to fall
 - Low birth and low death rate
- Maternal mortality rate is expressed in terms of:**
 - Per 1000
 - Per 10,000
 - Per 100,000
 - Per 1,000,000
- In India, high birth rate is due to all of the following reasons, except:**
 - Early puberty
 - Early marriage
 - Universality of marriage
 - High level of literacy
- Population statistics include indicators that measure all the following except:**
 - Population size
 - Sex ratio
 - Dependency ratio
 - Morbidity rate
- The ratio of number of pregnancies in a year to married women in the ages 15 to 44 years is called:**
 - Gross reproduction rate
 - Net reproduction rate
 - Pregnancy rate
 - Marriage rate
- The constant presence of a disease or an infectious agent within a given geographical area is called:**
 - Pandemic
 - Epidemic
 - Endemic
 - Sporadic
- The person, animal, object or substance from which an infectious agent passes or is disseminated to the host is called:**
 - Reservoir
 - Source
 - Carrier
 - Latent infection
- When two live vaccines are required, it should be given:**
 - Simultaneously at different sites
 - Simultaneously in the same site
 - Both together as IV
 - All of these
- When antibodies produced in one body are transferred to another to induce protection against disease, it is called:**
 - Active immunity
 - Herd immunity
 - Passive immunity
 - Cellular immunity
- Episiotomy has to be done during:**
 - First stage of labor
 - Second stage of labor
 - Third stage of labor
 - None of these
- A woman who never given birth to a child:**
 - Nullipara
 - Nulligravida
 - Primipara
 - Parturient
- A peptide hormone produced almost exclusively by the corpus luteum of pregnancy is:**
 - Leptin
 - Relaxin
 - Estriol
 - PAPP-A
- Increased pigmentation in the face during pregnancy is called:**
 - Linea nigra
 - Striae gravida
 - Chloasma
 - Caput medusae
- The thin serous fluid secreted from breast during the first 24 to 48 hours is called:**
 - Foremilk
 - Hindmilk
 - Colostrum
 - All of these



Ans.

- b
- a
- c
- c
- c
- d
- b
- d
- c
- a
- c
- d
- d
- c
- c
- b
- a
- c
- b
- c
- c

Tripura CHO 2021



- When India Government has adopted Family Planning Program?
 - 1950
 - 1952
 - 1954
 - 1956
- Which one of the following is the main target of family welfare programs?
 - Male after fertile age
 - Couples in the fertile age
 - Children below 12 years
 - Women after fertile age
- Breastfeeding Week is celebrated in:
 - 1st week of July
 - 1st week of August
 - 1st week of September
 - 1st week of November
- Which of these is a permanent method of contraception?
 - Tubal ligation
 - Vasectomy
 - MTIP
 - Both a and b
- How many times NFHS has been successfully completed in India till now?
 - 2
 - 3
 - 4
 - 5
- The most common side effect of IUD insertion is:
 - Bleeding
 - Pain
 - Pelvic infection
 - Ectopic Pregnancy
- Most common method of sterilization practiced in India?
 - Male sterilization
 - Female sterilization
 - Both equally common
 - All of these
- How many weeks post-delivery is called puerperium period?
 - 4 weeks
 - 6 weeks
 - 8 weeks
 - 10 weeks
- As per Indian Public Health Standards first antenatal visit should be done at?
 - 2 weeks of gestation
 - Within 12 weeks of gestation
 - Within 14 weeks of gestation
 - Within 20 weeks of gestation
- When did Janani Sishu Suraksha Karyakaram (JSSK) started in India?
 - 2008
 - 2011
 - 2014
 - 2018
- Vaginal spotting or bleeding between menses is called:
 - Pre-menstrual syndrome
 - Menorrhagia
 - Metrorrhagia
 - Dysmenorrhea
- The nurse is aware that an adaptation of pregnancy is an increased blood supply to pelvic region that results purplish discoloration of vaginal mucosa known as:
 - Ladin's sign
 - Hegar's sign
 - Goodell's sign
 - Chadwick's sign
- A woman is diagnosed to have severe anemia when the hemoglobin is below
 - 7 gm/dL
 - 10 gm/dL
 - 11 gm/dL
 - 12 gm/dL
- The postnatal period extends up to:
 - 2 weeks
 - 6 weeks
 - 4 weeks
 - 8 weeks
- The amount of protein provided in the nutritional supplement program for a lactating mother is:
 - 10–15 gm
 - 12–15 gm
 - 18–20 gm
 - 20–25 gm
- The hormone primarily responsible for the milk ejection:
 - Estrogen
 - Progesterone
 - Prolactin
 - Oxytocin
- White or yellowish white secretions that last for 10 to 15 days after delivery is called:
 - Lochia rubra
 - Lochia serosa
 - Lochia alba
 - All of these
- Leading cause of maternal death in India is:
 - Anemia
 - Hemorrhage
 - Sepsis
 - Obstructed labor
- Janani Suraksha Yojana (JSY) program focuses on reduction of ___?
 - Maternal and neonatal mortality
 - Girl mortality
 - Adolescent mortality
 - None of these
- The Adolescent people are in which age group as per WHO?
 - 10–16 years
 - 10–19 years
 - 15–24 years
 - 10–24 years
- As per National Population Policy of India, the age of girls for marriage is:
 - 15 years
 - 18 years
 - 21 years
 - 19 years
- The meaning of ARSH under RMNCH+A Program is:
 - Adolescent Reproductive and Sexual Health
 - Adolescent Reproductive and Social Health
 - Adolescent Regulation and Sexual Health
 - Adolescent Reward and Sexual Health
- Episiotomy has to be done during:
 - First stage of labor
 - Second stage of labor
 - Third stage of labor
 - None of the above
- Weekly Iron and Folic Acid Supplementation (WIFS) Programme is meant for:
 - Adolescent girls and lactating mothers
 - Adolescent boys, pregnant mother and lactating
 - Pregnant women
 - Adolescent boys and girls
- The color of lochia rubra is:
 - White
 - Red
 - Yellow
 - Orange
- Pentavalent vaccine is given at:
 - 4, 8, 12 weeks
 - 5, 10, 15 weeks
 - 6, 10, 14 weeks
 - 4, 8, 16 weeks



Ans.

- b
- b
- b
- d
- c
- a
- b
- b
- b
- b
- c
- d
- a
- b
- c
- d
- d
- c
- b
- a
- b
- b
- a
- b
- d
- b
- b
- c



MP CHO 2019 (Set-1)



Ans.

1. d
2. b
3. d
4. c
5. c
6. a
7. b
8. d
9. a
10. d
11. b
12. b
13. a
14. b
15. c
16. a
17. b
18. d
19. b
20. c
21. c
22. d
23. a
24. d
25. d
26. a

1. Who is the governor of Madhya Pradesh?

- a. Anandiben Patel b. Kalraj Mishra
c. Bhagat Singh Koshiyari d. Lalji Tandon

2. Who is PV Sindhu?

- a. Cricket player b. Badminton player
c. Hockey Player d. Shooting Champion

3. Who is Union health minister?

- a. Mansukh Mandaviya b. Rajnath Singh
c. JP Nadda d. Harsh Vardhan

4. When is World Health Day celebrated?

- a. 5th Jan b. 10th Feb
c. 7th April d. 1st May

5. What is not true?

- a. Cricket is not the national game of India
b. Saina Nehwal is not the present world badminton champion
c. India has never won a gold medal in Olympic hockey
d. PT Usha has won a gold medal in 100 meter race in Olympics

6. Which statement is true?

- a. Dengue is a mosquito-borne viral infection
b. Malaria is a non-infectious disease
c. H1N1 is not directly associated with Swine Flu
d. Typhoid doesn't spread through contaminated food and drinking water

7. Which is the largest state in India?

- a. Madhya Pradesh b. Rajasthan
c. Maharashtra d. Uttar Pradesh

8. Which is the largest internal organ in human body?

- a. Brain b. Heart
c. Kidney d. Liver

9. What is Rafale?

- a. Fighter Aircraft b. Nuclear submarine
c. Assault rifle d. Anti-Tank missile

10. Where is Gurdwara Darbar Sahib Kartarpur located?

- a. Jammu and Kashmir b. Himachal Pradesh
c. Haryana d. Pakistan

11. What is normal body temperature in Fahrenheit?

- a. 98.2 b. 98.6
c. 99.2 d. 99.6

12. Which gland or organ doesn't work right in type 1 diabetes?

- a. Pituitary gland b. Pancreas
c. Adrenal glands d. Kidneys

13. Poor output of urine is known as:

- a. Oliguria b. Pyuria
c. Enuresis d. Diuresis

14. Which cell secretes antibody?

- a. Monocytes b. Lymphocytes
c. Neutrophils d. Eosinophils

15. Long standing high blood pressure may result in:

- a. Cardiomegaly b. Cardiac failure
c. Heart attack d. All of these

16. The respiratory system is made up of trachea, the lungs and the:

- a. Diaphragm b. Pancreas
c. Esophagus d. Liver

17. The opening of right atrium into right ventricle is guarded by:

- a. Mitral valve b. Tricuspid valve
c. Bicuspid valve d. Aortic semilunar valve

18. A band of tough, flexible connective tissue which connects two bones or cartilages or hold together a joint is called:

- a. Joint b. Cartilage
c. Tendon d. Ligament

19. What is true about small intestine?

- a. Duodenum is not part of small intestine
b. Digestion is completed
c. Ileum is middle part of small intestine
d. All of the these

20. Moving arm towards the body's midline:

- a. Abduction b. Flexion
c. Adduction d. Extension

21. Which of the following is used to take cervical smear?

- a. Colposcope b. Vaginoscope
c. Ayre's spatula d. Laparoscope

22. All are included in hypertensive disorder of pregnancy, except:

- a. Pre-eclampsia
b. Chronic hypertension with superimposed pre-eclampsia
c. Gestational hypertension
d. None of these

23. How many weeks does a typical pregnancy last?

- a. 40 b. 38
c. 42 d. 44

24. Worldwide most common problem during pregnancy is:

- a. Diabetes b. Preeclampsia
c. UTI d. Iron deficiency anemia

25. Fetal tachycardia is defined as fetal heart rate greater than:

- a. 120 – 140 beats/min
b. 140 – 160 beats/min
c. 150 – 170 beats/min
d. 160 – 180 beats/min

26. The nurse is caring for a patient who had a spontaneous abortion. The nurse's priority should be assessing the patient for:

- a. Hemorrhage b. Dehydration
c. Hypertension d. Sub-involution

GENERAL KNOWLEDGE

GK UPDATES (MONTHLY)

JUNE 2022

- Indian women's team won gold in 10 m air rifle at ISSF World Cup 2022
- Argentina beat Italy to win 2022 Finalissima Championship
- eSanjeevani integrated with NHA's Ayushman Bharat Digital Mission: **This will now enable users of eSanjeevani to create their 14-digit unique Ayushman Bharat Health Account (ABHA) and use it to link their existing health records**
- PM Narendra Modi launched a global initiative 'Lifestyle for the Environment (LiFE) Movement' on the occasion of World Environment Day.
- India's Sakshi Malik (62 kg), Divya Kakran (68 kg) and Mansi Ahlawat (57 kg) won gold medal at the 2022 Bolat Turlykhanov Cup wrestling tournament in Kazakhstan.
- Rajasthan government launched a Special Health Care Abhiyan 'Anchal' in the Karauli district for pregnant women.
- List of winners of IIFA 2022
 - Vicky Kaushal won the best actor award for his movie Sardar Udham at the 22nd International Indian Film Academy Awards in Abu Dhabi, United Arab Emirates.
 - Other awards:
 - Best Actor (Female): Kriti Sanon (Mimi)
 - Best Director: Vishnuvardhan (Shershaah)
 - Best Film: Shershaah
 - Best Supporting Actor Female: Sai Tamhankar (Mimi)
 - Best Supporting Actor Male: Pankaj Tripathi (Ludo)

- Best Playback Singer Female: Asees Kaur (Raataan Lambiyan, Shershaah)
- Indian shooter Avani Lekhara won gold at 2022 Para Shooting World Cup

MAY 2022

- IPL 2022 Final: Gujarat Titans won the title
- Fortune 500 list: Elon Musk, world's richest man, was 2021's highest paid CEO
- World Food Prize 2022 received by NASA's Cynthia Rosenzweig
- RBI Monetary Policy: RBI hiked Repo Rate by 40 bps to 4.40 percent
- Lionel Messi topped Forbes' highest-paid athletes list for 2022
- Indian novel 'Tomb of Sand' won International Booker Prize
- 75th Cannes Film Festival 2022 held at Cannes, France

Full List of Winners at 2022 Cannes Film Festival

- Palme d'Or:** Triangle of Sadness, directed by Ruben Östlund
- Grand Prix:** Stars at Noon, directed by Claire Denis and Close directed by Lukas Dhont
- Jury Prize:** Eo, directed by Jerzy Skolimowski and Le Otto Montagne, directed by Charlotte Vandermeersch and Felix van Groeningen
- Best Director:** Park Chan-wook for Decision to Leave
- Best Actor:** Song Kang-ho for Broker
- Best Actress:** Zar Amir Ebrahimi for Holy Spider
- Best Screenplay:** Tarik Saleh (Boy from Heaven)
- Camera d'Or:** Gina Gammell and Riley Keough for War Pony
- Jury Special Award:** Tori and Lokita
- L'Œil d'Or:** All That Breathes
- Jury Special Award (documentary):** Mariupolis 2

Italian Open 2022: Complete list of winners

Category	Winner	Runner-up
Men's singles	Novak Djokovic (Serbia)	Stefanos Tsitsipas (Greece)
Women's singles	Iga Świątek (Poland)	Ons Jabeur (Tunisia)
Men's doubles	Nikola Mektić and Mate Pavić (Croatia)	John Isner (United States) & Diego Schwartzman (Argentina)
Women's doubles	Veronika Kudermetova and Anastasia Pavlyuchenkova (Russia)	Gabriela Dabrowski (Canada) & Giuliana Olmos (Mexico)

- World Leprosy day is observed on: **31 January 2022**
- 74th Martyr's day observed on – **30th January**
- A Little Boy of India Celebrating 75 years of India authored by – **Ruskin Bond**
- On January 29 GOI appoints _____ as Chief Economic Advisor – **Anantha Nageshwaran**
- Fearless Governance is authored by – **Kiran Bedi**
- Women's Asia Cup Hockey 2022- **India beat China to win Bronze**
- World Neglected Tropical Diseases Day observed on – **January 30**
- The book "The \$10 Trillion Dream" authored by - **Subhash Garg**
- **Jai Bhim Marakar** shortlisted for the Oscar 2022
- India's Koozhangal gets the best film award Dhaka International film
- Pradhan Mantri Rashtriya Bal Puraskar 2022 awarded to – **29 children**
- Netaji Award 2022 given to **Former Japan Prime Minister Shinzo Abe**
- International Day of Education is observed on - **January 24**
- International Association of Working Women Award – **Sushmita Sen**
- The 2021 Oxford Children's Word of the Year – **Anxiety**
- Who has been appointed as the new chairman of IFFCO - **Dileep Sanghani**
- Which country to host AFC Women's Football Asian Cup 2022 – **India**
- A book titled "Bose: The Untold Story of An Inconvenient Nationalist" by **Chandrachur Ghose**
- Mrs World 2022 crowned – **Sharlyn Ford**
- National Startup day – **January 16**
- Who has been appointed as new chairman of ISRO - **S Somanath**
- Who has been named as 73rd Chess Grandmaster **Bharath Subramaniam**
- World Hindi Day is observed on – **January 10**
- A new book titled "Mamata Beyond 2021" authored by **Jayanta Ghosal**

FIFA FOOTBALL AWARD 2021

Category	Winner
Best FIFA Men's Player	Robert Lewandowski (Bayern Munich, Poland)
Best FIFA Women's Player	Alexia Putellas (Barcelona, Spain)
Best FIFA Men's Goalkeeper	Édouard Mendy (Chelsea, Senegal)
Best FIFA Women's Goalkeeper	Christiane Endler (Paris Saint-Germain and Lyon, Chile)
Best FIFA Men's Coach	Thomas Tuchel (Chelsea, Germany)
Best FIFA Women's Coach	Emma Hayes (Chelsea, England)
FIFA Fair Play Award	Denmark national football team and medical staff
FIFA Special Award for an Outstanding Career Achievement	Christine Sinclair (Female) & Cristiano Ronaldo (Male)

GOLDEN GLOBE AWARD

An Initiative by CBS Nursing Division

Category	Winners
Best Film (Drama)	The Power of the Dog
Best Film (Musical or Comedy)	West Side Story
Best Actor (Drama)	Will Smith for King Richard as Richard Williams
Best Actress (Drama)	Nicole Kidman for Being the Ricardos as Lucille Ball
Best Actor (Musical or Comedy)	Andrew Garfield for tick, tick... BOOM! as Jonathan Larson
Best Actress (Musical or Comedy)	Rachel Zegler for West Side Story as María Vasquez
Best Supporting Actor	Kodi Smit-McPhee for The Power of the Dog as Peter Gordon
Best Supporting Actress	Ariana DeBose for West Side Story as Anita
Best Director	Jane Campion for The Power of the Dog
Best Screenplay	Kenneth Branagh for Belfast
Best Original Score	Hans Zimmer for Dune
Best Original Song	"No Time to Die" (Billie Eilish and Finneas O'Connell) – No Time to Die
Best Animated Feature	Encanto
Best Non-English Film	Drive My Car (Japan)



Sl. No.	Name	Ministry
16.	Shri Piyush Goyal	1. Ministry of Textiles 2. Ministry of Commerce and Industry 3. Ministry of Consumer Affairs, Food and Public Distribution
17.	Shri Dharmendra Pradhan	1. Ministry of Education 2. Ministry of Skill Development and Entrepreneurship
18.	Shri Mukhtar Abbas Naqvi	Ministry of Minority Affairs
19.	Shri Pralhad Joshi	1. Ministry of Parliamentary Affairs 2. Ministry of Coal 3. Ministry of Mines
20.	Shri Jyotiraditya M. Scindia	Ministry of Civil Aviation
21.	Shri Giriraj Singh	1. Ministry of Rural Development 2. Ministry of Panchayati Raj
22.	Shri Gajendra Singh Shekhawat	Ministry of Jal Shakti
23.	Shri Pashu Pati Kumar Paras	Ministry of Food Processing Industries
24.	Shri Kiren Rijju	Ministry of Law and Justice
25.	Shri Raj Kumar Singh	1. Ministry of Power 2. Ministry of New and Renewable Energy
26.	Shri Hardeep Singh Puri	1. Ministry of Petroleum and Natural Gas 2. Ministry of Housing and Urban Affairs
27.	Shri Bhupender Yadav	1. Ministry of Environment, Forest and Climate Change 2. Ministry of Labour and Employment
28.	Dr. Mahendra Nath Pandey	Ministry of Heavy Industries
29.	Shri Parshottam Rupala	Ministry of Fisheries, Animal Husbandry and Dairying
30.	Shri G. Kishan Reddy	1. Ministry of Culture 2. Ministry of Tourism 3. Ministry of Development of North Eastern Region
31.	Shri Anurag Singh Thakur	1. Ministry of Information and Broadcasting 2. Ministry of Youth Affairs and Sports

LIST OF CHIEF MINISTERS IN INDIA (AS ON JUNE 2022)

State	Chief Minister
Andhra Pradesh	Y.S. Jagan Mohan Reddy
Arunachal Pradesh	Pema Khandu
Assam	Himanta Biswa Sarma
Bihar	Nitish Kumar
Chhattisgarh	Bhupesh Baghel
Goa	Pramod Sawant
Gujarat	Bhupendrabhai Patel
Haryana	Manohar Lal Khattar
Himachal Pradesh	Jai Ram Thakur
Jharkhand	Hemant Soren
Karnataka	Sri Basavaraj Bommai
Kerala	Pinarayi Vijayan
Madhya Pradesh	Shivraj Singh Chouhan
Maharashtra	Uddhav Thackeray
Manipur	N. Biren Singh



Contd...

GENERAL INTELLIGENCE AND REASONING ABILITY

NUMBER SERIES

Directions to solve: In each series, look for the degree and direction of change between the numbers. In other words, do the numbers increase or decrease, and by how much.

- Look at this series: 2, 1, (1/2), (1/4), ... What number should come next?
 - 1/3
 - 1/8
 - 2/8
 - 1/16
- Look at this series: 22, 21, 23, 22, 24, 23, ... What number should come next?
 - 22
 - 24
 - 25
 - 26
- Look at this series: 3, 4, 7, 8, 11, 12, ... What number should come next?
 - 7
 - 10
 - 14
 - 15
- Look at this series: 31, 29, 24, 22, 17, ... What number should come next?
 - 15
 - 14
 - 131
 - 12
- Look at this series: 201, 202, 204, 207, ... What number should come next?
 - 205
 - 208
 - 210
 - 211
- Look at this series: 7, 10, 8, 11, 9, 12, ... What number should come next?
 - 7
 - 10
 - 12
 - 13
- Look at this series: 53, 53, 40, 40, 27, 27, ... What number should come next?
 - 12
 - 14
 - 27
 - 53
- Look at this series: 21, 9, 21, 11, 21, 13, 21, ... What number should come next?
 - 14
 - 15
 - 21
 - 23
- Look at this series: 58, 52, 46, 40, 34, ... What number should come next?
 - 26
 - 28
 - 30
 - 32
- Look at this series: 14, 28, 20, 40, 32, 64, ... What number should come next?
 - 52
 - 56
 - 96
 - 128
- Look at this series: 544, 509, 474, 439, ... What number should come next?
 - 404
 - 414
 - 420
 - 445
- Look at this series: 80, 10, 70, 15, 60, ... What number should come next?
 - 20
 - 25
 - 30
 - 50

ANALOGY TEST

- 'Bull' is related to 'cow' in the same way as 'Horse' is related to:
 - Animal
 - Mare
 - Stable
 - Meat
- 'Dearth' is related to 'Scarcity' in the same way as 'Substitute' is related to:
 - Replace
 - Rumor
 - Destroy
 - Assume
- 'Hate' is related to 'Love' in the same way as 'Create' is related to:
 - Make
 - Renovate
 - Destroy
 - Built
- 'Sailor is related to 'Ship' in the same way as 'Lawyer' is related to:
 - Legal
 - Law
 - Court
 - Ruling
- 'Numismatic' is related to 'coin' in the same way as 'Paleontology' is related to:
 - Earth
 - Soil
 - Fossils
 - Stones

Directions for 6-10: In each of the questions below, choose the group of words that shows the same relationship as given in every question.

- Ink: Pen: Paper**
 - Watch: Dial: Strap
 - Book: Paper: Words
 - Colour: Brush: Canvas
 - Farmer: Plough: Field
- Mouth: Teeth: Chew**
 - Eyes: Lashes: See
 - Head: Brain: Think
 - Skin: Sweat: Touch
 - Feet: Dance: Toe
- Clay: Potter: Pots**
 - Doctor: Injection: Pills
 - Cloth: Tailor: Clothes
 - Black board: Chalk: Teacher
 - Electricity: Bulb: Light
- Play: Win: Lose**
 - Accident: Death: Survive
 - Examination: Success: Determination
 - Read: Book: Magazine
 - Music: Dance: Art
- Talk: Whisper: Shout**
 - Boredom: Tired ness: Rest
 - Touch: Hold: Embrace
 - See: Look: Watch
 - Create: Look: Watch

Directions for 11-21: A good way to figure out the relationship in a given question is to make up a sentence that describes the relationship between the first two words. Then, try to use the same sentence to find out which of the answer choices completes the same relationship with the third word.

- Odometer is to mileage as compass is to:**
 - Speed
 - Hiking
 - Needle
 - Direction
- Marathon is to race as hibernation is to:**
 - Winter
 - Bear
 - Dream
 - Sleep



ARITHMETICAL AND NUMERICAL ABILITY

NUMBER SYSTEM

- Natural numbers:** Counting numbers 1, 2, 3, 4, 5.....are known as natural numbers
- Whole numbers:** If we include 0 among the natural numbers, then the numbers 0, 1, 2, 3, 4, 5 etc. are called whole numbers
- Integers:** All counting numbers and their negatives including zero are known as integers. The set of integers are {...-3, -2, -1, 0, 1, 2, 3, 4.....}
 - Positive integers are the set {1, 2, 3, 4, 5.....} of all positive integers. Positive integers and natural numbers are synonyms.
 - Negative integers are the set of {-1, -2, -3, -4 ...} all negative integers. 0 is neither positive nor negative.
- Rational numbers:** The numbers of the form p/q , where p and q are integers and $q \neq 0$ are known as rational numbers, e.g., $2/3$, $5/3$, etc.
- Irrational numbers:** Those numbers which when expressed in decimal form are neither terminating nor repeating decimals are known as irrational numbers, e.g., $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$etc.
- Real numbers:** The rational and irrational numbers combined together are called real numbers, e.g., $11/21$, $\sqrt{5}$, $3 + \sqrt{5}$, etc.
- Prime numbers:** Number divisible by 1 and itself and not divisible by any other number is called prime number, e.g., 2, 3, 5, 7, 11, etc.
- Composite numbers:** Natural numbers greater than 1 which are not prime numbers, e.g., 4, 6, 9, etc.
- Co-prime numbers:** Two numbers which have only 1 as the common factors are called Co-primes or relatively prime to each others, e.g., (3, 7) (8, 9) (36, 35), etc.

TEST OF DIVISIBILITY

- Divisible by 2:** A number divisible by 2 if the unit digit is zero or divisible by 2, e.g., 22, 42, 84, 3872, etc.
- Divisible by 3:** A number is divisible by 3 if the sum of all digits in the number is divisible by 3, e.g., 2553 here $2 + 5 + 5 + 3 = 15$, which is divisible by 3. So 2553 is divisible by 3.
- Divisible by 4:** A number is divisible by 4, if the sum of its last 2 digits is divisible by 4, e.g., 5249376 is divisible by 4, since 76 is divisible by 4.
- Divisible by 5:** A number is divisible by 5 if its unit digit is 5 or 0, e.g., 50, 505, 328695 is divisible by 5.
- Divisible by 6:** A number is divisible by 6 if the number is even and sum of digits is divisible by 3, e.g., 4536 is an even number also sum of digits $4 + 5 + 3 + 6 + 18$ is divisible by 3.
- Divisible by 8:** A number is divisible by 8 only when the number formed by its last digits is divisible by 8, e.g., 5647472 here 472 is divisible by 8 hence, this number 5647472 is divisible by 8.
- Divisible by 9:** A number is divisible by 9 if the sum of its digit is divisible by 9. e.g., 594324 is divisible by 9, since the sum of its digits $(5 + 9 + 4 + 3 + 2 + 4)$ is 27, which is divisible by 9.

- Divisible by 10:** A number is divisible by 10 if its unit digit is 0, e.g., 90, 900, 740, etc.
- A number is divisible by 11** if the difference of sum of digit at odd places and sum of digit at even places is either 0 or divisible by 11, e.g., 1331 is divisible by 11 since (sum of its digits at odd places $1 + 3$) - (sum of its digits at even places $3 + 1$) and their difference is $4 - 4$ is 0, so 1331 is divisible by 11.

LCM AND HCF

- Least common multiple:** The lowest common multiple (LCM) of two whole numbers is the smallest whole number which is a multiple of both.

Example: Consider the numbers 12 and 15 again:
The multiples of 12 are: 12, 24, 36, 48, 60, 72, 84,
The multiples of 15 are: 15, 30, 45, 60, 75, 90,....
60 is a common multiple (a multiple of both 12 and 15), and there are no lower common multiples.
Therefore, the lowest common multiple of 12 and 15 is 60.
- Highest Common Factor:** The highest common factor (HCF) of two whole numbers is the largest whole number which is a factor of both.

Example: Consider the numbers 12 and 15:
The factors of 12 are: 1, 2, 3, 4, 6, 12.
The factors of 15 are: 1, 3, 5, and 15.
1 and 3 are the only common factors (numbers which are factors of both 12 and 15).
Therefore, the highest common factor of 12 and 15 is 3.

HCF AND LCM OF FRACTIONS

- HCF of fraction = HCF of numerators/LCM of denominators
- LCM of fraction = LCM of numerators/HCF of denominators

SIMPLIFICATION

Remember the word, "BODMAS"

- B-** Bracket first
- O-** Orders (i.e., Powers and square roots, etc.)
- D-** Then Division
- M-** Multiplication, after that
- A-** Addition and last
- S-** Subtraction

Common Algebraic Formulae

- $(a + b)^2 = a^2 + 2ab + b^2$
- $a^2 + b^2 = (a + b)^2 - 2ab$
- $(a - b)^2 = a^2 - 2ab + b^2$
- $(a + b + c)^2 = a^2 + b^2 + c^2 + 2(ab + bc + ca)$
- $(a + b)^3 = a^3 + b^3 + 3ab(a + b)$
- $a^3 + b^3 = (a + b)^3 - 3ab(a + b)$
- $(a - b)^3 = a^3 - b^3 - 3ab(a - b)$
- $a^3 - b^3 = (a - b)^3 + 3ab(a - b)$
- $a^2 - b^2 = (a + b)(a - b)$
- $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$
- $a^3 + b^3 = (a + b)(a^2 - ab + b^2)$



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E-mail: feedback@cbspd.com, **Website:** www.cbspd.com
 New Delhi | Bengaluru | Chennai | Kochi | Kolkata | Lucknow | Mumbai | Pune
 Hyderabad | Nagpur | Patna | Vijayawada

ISBN: 978-93-94525-13-9



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