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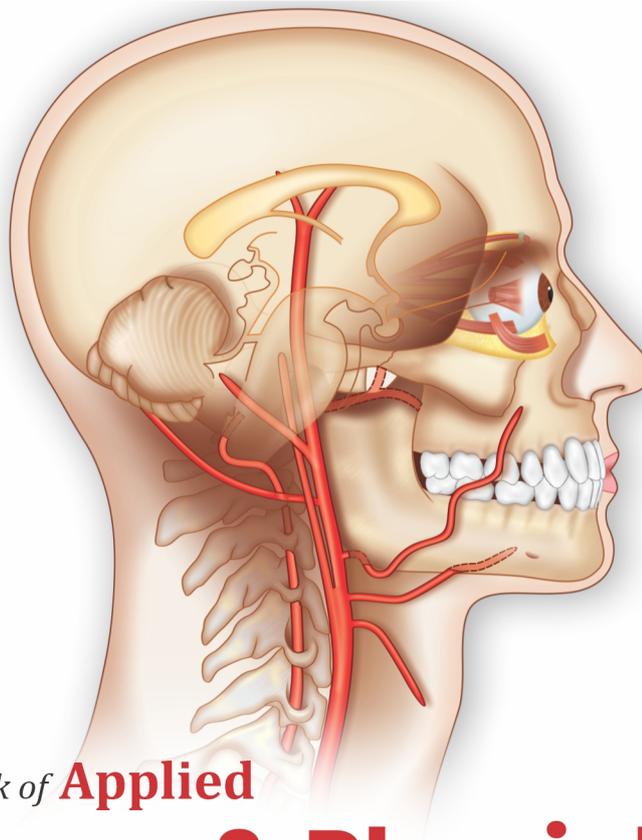


LOOKinside



Based on **INC Syllabus 2021-22**

I
Semester



Practice Workbook of **Applied**

Anatomy & Physiology

for BSc Nursing Students

As per the Revised INC Syllabus (2021-22) for BSc Nursing



CBS Publishers & Distributors Pvt. Ltd.

Krishna Garg



Nursing Knowledge Tree
An Initiative by CBS Nursing Division

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PREFACE

“I hear, I imagine; I see, I remember; I do, I understand.”

The *Workbook of Applied Anatomy & Physiology for BSc Nursing Students* contains the core and clinical aspects of human Anatomy & Physiology which are tested in the format of various exercise patterns. This workbook has been developed with the vision to facilitate structured learning and quick revision of all the important topics in the self-assessment exercises. This would permit the bright students to read, learn, relearn the subjects and evaluate the progress after a good amount of hardwork.

The exercises have been arranged in 20 chapters following the chapter sequence of BD Chaurasia's Anatomy & Physiology for BSc students (text and digital).

Salient features of the workbook are:

- This workbook has been developed as per the revised INC syllabus
- It has been designed in user-friendly format keeping in mind the need of students
- Simple and lucid language has been preferred for easy and quick understanding
- A number of questions related to anatomical sketches have been included to help the students understand the intricate structures of human body in the simplest form
- A variety of learning exercises have been included, e.g., *Label the Diagrams, Draw the Diagrams, Define The Term, Fill in the Blanks, Multiple Choice Questions, Match the Following, True/False*, etc., to test the holistic knowledge and skills of students.
- Answer Keys to all the exercises of the Workbook are given at the end for the convenience of the readers.

It is hoped and prayed that this workbook would fulfil the aim of the students who are learning about human body's structures and functions thoroughly. Thus, they will do well in their profession and rise to greater heights for still better goals.

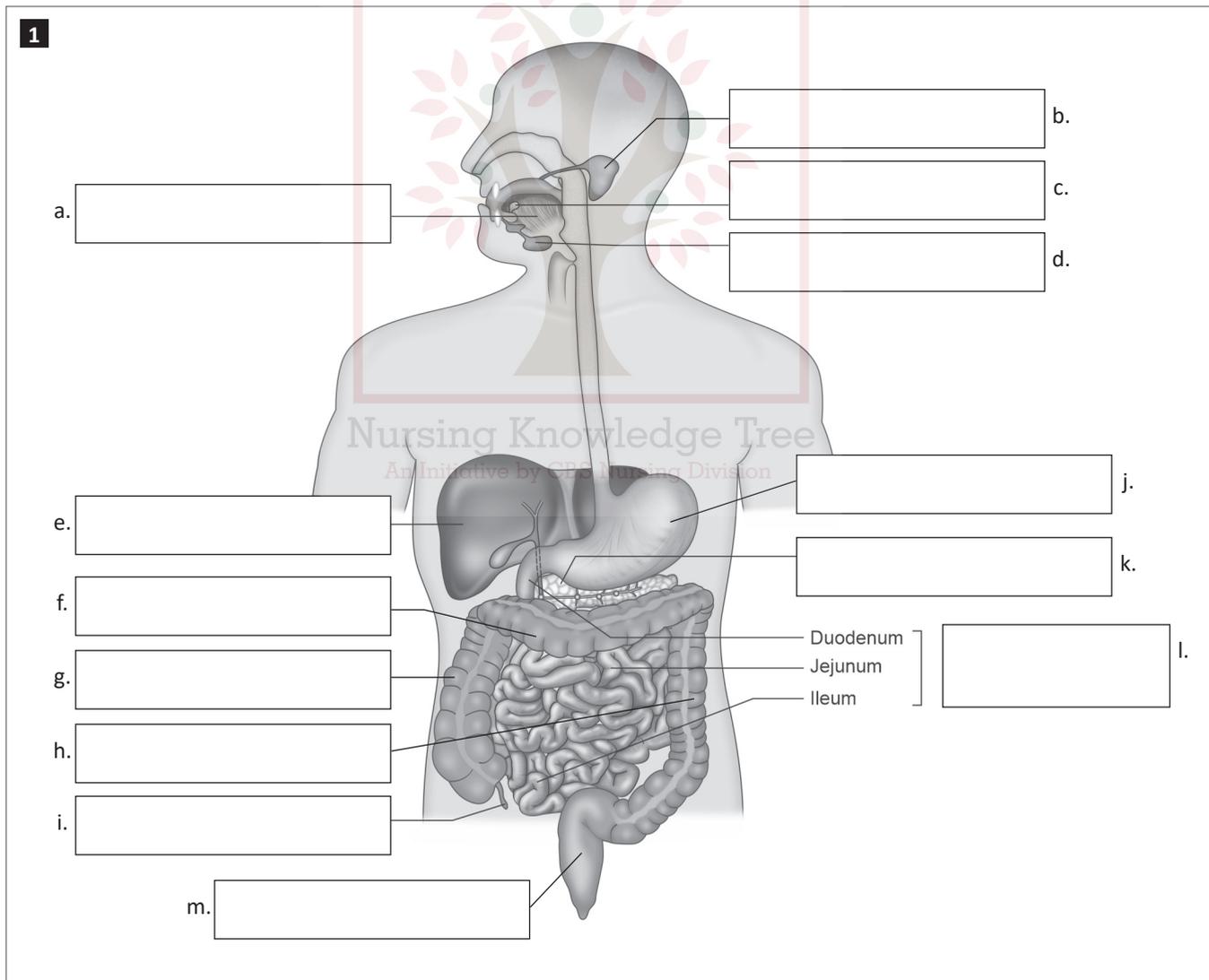
Best part of this workbook should be to induce the nurses to serve their patients smartly and efficiently and to become more humane professionals.

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Digestive System

Question A: Label the given diagrams:



2

a. **Liver:**

b. **Small intestine:**

c. **Salivary glands:**

d. **Stomach:**

e. **Pancreas:**

Write 2–3 functions of various parts of digestive system.

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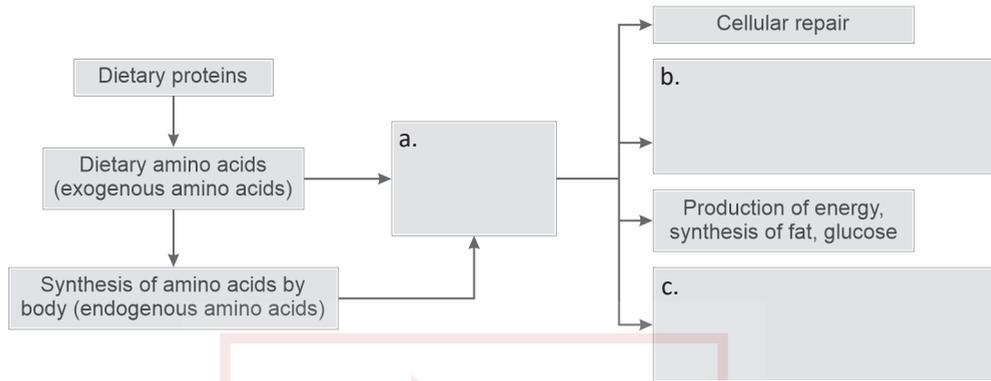
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    graph TD
      DF[Dietary fat] --> A[a.]
      A --> L[Lacteals]
      L --> LY[Lymphatics]
      LY --> B[Blood]
      B --> TT[Transported to tissues]
      B --> B2[b.]
      B --> P[Produce special products]
      B --> C[Converted to human fat]
      TT --> B2
      B2 --> P
      P --> C
      C --> C2[c.]
    
```

Fill in the empty boxes.

4



Fill in the empty boxes.

Question B: Draw the diagrams and label them:

1



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Draw anatomy of tooth and write types of teeth with their functions.

2



Composition of gastric juice

3

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Histology of esophagus

Question D: Tabulate:

1. Compare small and large intestines.

Features	Small intestines	Large intestines
	 <p data-bbox="544 1194 1068 1278">Nursing Knowledge Tree An Initiative by CBS Nursing Division</p>	

2. Functions of:

a. Saliva:

b. Major digestive system hormones:

c. Small intestine:

d. Liver:

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Question E: Fill in the blanks:

1. Descending colon is joined to rectum via _____.
2. Joint between tooth and gum is called _____.
3. Palatine tonsil is a part of _____.
4. Characteristic feature of small intestine is _____.
5. Parts of pharynx are _____, _____, and _____.
6. Characteristic features of large intestine are sacculations, taenia coli and _____.

7. Most common position of vermiform appendix is _____.
8. Submucosal layer of duodenum contains _____ glands.
9. Peyer's patches are present in the _____.
10. Pancreas is both an exocrine and _____ gland.
11. Digestive system is a long tube from mouth/oral cavity till _____. Associated with this tube are accessory glands like salivary glands, _____, _____, _____ etc.
12. Histological layers of most of digestive tube/alimentary canal are _____, _____, _____ and _____.
13. Duct of _____ opens in the vestibule opposite 2nd upper molar tooth.
14. Teeth are _____ in a child, and _____ in an adult. These form _____ with maxilla and mandible.
15. Lateral to tongue are _____ which provide immunity to the person.
16. Palatine tonsil is lined by _____.
17. Esophagus comprises a small _____, long _____ and a very small _____. Lower end of esophagus is a site of portosystemic anastomosis.
18. Stomach is the most dilatable part of digestive tube. Its muscular externa is composed of outer _____, middle _____ and innermost _____ of smooth muscle fibers.
19. Small intestine follows the stomach. It has three parts— the _____, _____ and _____.
20. Appendicitis: During early stage, pain is referred to _____. Later on, pain is localized to _____.
21. 80% of liver is supplied by _____, while 20% of liver is supplied by _____.
22. _____ flows in liver from periphery to the center, while _____ flows from central part of lobule to the periphery in the bile ductule.

Question F: Multiple choice questions:

1. Jejunum is characterized by all features; except:

a. Thicker walls than ileum	b. Less fat in walls than ileum
c. More arterial arcades	d. More valvulae conniventes
2. Following are the structures in the stomach bed; except:

a. Pancreas	b. Splenic artery
c. Gastric surface of spleen	d. Lesser sac
3. Pain in periumbilical area with nausea in a female of 30 years is most likely due to:

a. Cholecystitis	b. Appendicitis
c. Ectopic pregnancy	d. Torsion of right ovary

4. Case of progressive jaundice with gallstones will show gallstones in which duct?
 - a. Gallbladder
 - b. Cystic duct
 - c. Common hepatic duct
 - d. Bile duct
5. Boy falls from his bicycle on his left side. He gets abdominal injury and pain in his left shoulder. Which organ is most likely to be affected?
 - a. Left kidney
 - b. Spleen
 - c. Left thing
 - d. Left ribs
6. During liver biopsy, the patient must:
 - a. Take deep breaths
 - b. Take shallow breaths
 - c. Hold breaths
 - d. Do normal breathing
7. Which of the following muscle is in spasm during appendicitis?
 - a. Iliacus
 - b. Psoas major
 - c. Obturator externus
 - d. Adductor magnus

Question G: Match the following:

- | | |
|---------------------------------|---|
| 1. a. Splenic flexure of colon | i. Right iliac fossa |
| b. Vermiform appendix | ii. It is in contact with spleen |
| c. Second part of duodenum | iii. Pylorus |
| d. Lies at level of L1 vertebra | iv. Anterior to hilum to the right kidney to the right of midline |
| 2. a. Coronary ligaments | i. Lies to the left of gallbladder |
| b. Left lobe of liver | ii. Enclosed by lesser omentum |
| c. Porta hepatis | iii. Encloses the bare area of liver |
| d. Quadrate lobe | iv. Related posteriorly to esophagus |

Question H: Mark the True/False:

1. **Esophagus:**
 - a. Lies posterior to trachea T / F
 - b. Related to vertebral column T / F
 - c. Related to right atrium T / F
 - d. Pierces diaphragm at T8 level T / F
2. **Parotid gland:**
 - a. It is purely serous in nature T / F
 - b. Facial nerve passes through it and supplies the gland T / F
 - c. Secretomotor fibers relay in otic ganglion T / F
 - d. It is enclosed by deep cervical fascia T / F

3. **Porta hepatis:**

- a. Contains hepatic veins T / F
- b. Contains hepatic ducts, branches of hepatic artery and portal vein T / F
- c. It is enclosed by lesser omentum T / F
- d. Contains lymph nodes T / F

4. **The duodenum:**

- a. Its length is about 25 cm T / F
- b. It is intraperitoneal T / F
- c. Lies anterior to hilum of right kidney T / F
- d. Bile and pancreatic ducts open in its third part T / F

5. **The pancreas:**

- a. Contains two ducts T / F
- b. It is intraperitoneal T / F
- c. Both an exocrine and endocrine gland T / F
- d. Portal vein is formed behind neck of pancreas T / F

6. **Rectum:**

- a. It is supplied by superior mesenteric artery T / F
- b. It is fully covered by peritoneum T / F
- c. Contains taenia coli T / F
- d. Contains both lateral and anteroposterior curvatures T / F

7. **Ischioanal fossa:**

- a. Bounded by anal canal medially T / F
- b. Bounded by fascia of obturator internus muscle laterally T / F
- c. Roof is formed by fascia of levator ani T / F
- d. Pudendal nerve and internal pudendal vessels lie in its lateral wall T / F



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About the Author

Krishna Garg, MBBS, MS, PhD, FAMS, FIAMS, FIMSA, FASI, is presently working as a Consultant & Guest Faculty at Pt. Deendayal Upadhyaya National Institute for Persons with Physical Disabilities, New Delhi. She is ex-Professor and Head, Department of Anatomy, Lady Hardinge Medical College (LHMC), New Delhi. She is a co-author of Anatomy and Physiology for Nurses and Allied Health Sciences designed for BSc (Nursing) students. The author is the Chief Editor of BD Chaurasia's Human Anatomy (Vols 1-4), Editor of BDC Human Anatomy for Dental Students, BDC Human Embryology and BDC Handbook of General Anatomy. **She is also the co-author of Textbook of Histology 5/e and Textbook of Neuroanatomy 6/e.**



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