

Printing Pages : 2

Paper Code : BOTT - 101

Roll No.

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B.Sc. (O.T)**(1st Year) EXAMINATION****HUMAN ANATOMY & PHYSIOLOGY***Time : 3:00 Hours]**[Max. Marks : 70*

**Note:- All question are compulsory. Make diagrams wherever required.
Read the instructions carefully. Separate sheet for Separate section.**

(Section A - Anatomy) (36 Marks)**1. Attempt all. Select the correct choice.****[2×3=6**

i) Tibia is a bone of:

a) Upper limb

b) Lower limb

c) Thorax

d) None of the above

ii) Thyroid gland is a

a) Exocrine gland

b) Endocrine gland

c) Salivary gland

d) None of the above

iii) Number of lumbar vertebrae is

a) 7

b) 5

c) 8

d) 12

2. Fill in the blanks. Attempt all.**[3×2=6**

i) Number of spinal nerves is..... pairs.

ii) Inferior vena cava carries deoxygenated blood from..... limb

iii) Jejunum is part of.....intestine.

3. True or false. Attempt all.**[2×2=4**

i) Gall bladder stores bile.

ii) Kidney is not a organ of urinary system.

4. Attempt any two of the following.**[5×2=10**

i) Discuss gross anatomy of spinal cord.

ii) Discuss external features of heart.

iii) Discuss gross anatomy of lungs.

5. ^[10×1=10] Attempt any one of the following.

[10×1=10]

- i) Describe external features of stomach.
- ii) Describe gross anatomy of uterus.

(Section B - Physiology) (34 Marks)

1. Attempt all. Select the correct choice.

[2×2=4]

- i) Oxytocin is secreted from:
 - a) Hypothalamus
 - b) Anterior pituitary
 - c) Posterior pituitary
 - d) Thyroid
- ii) Which of the following is not the function of hemoglobin:
 - a) Transport of CO₂ & O₂ through blood
 - b) Act as buffer
 - c) Removal of waste metabolites from the body
 - d) Acid base balance

2. Fill in the blanks. Attempt all.

[2×2=4]

- i) Amount of blood pumped by each ventricle is.....
- ii) Increased heart rate is.....

3. True or false. Attempt all.

[2×3=6]

- i) Prostate is a female genital organ.
- ii) Elbow joint has flexion & extension movements.
- iii) Mitral valve is a tricuspid valve.

4. Attempt any two of the following.

[5×2=10]

- i) Write down the function of kidney.
- ii) Functions of thyroid hormone.
- iii) Write short note on pulmonary surfactant.

5. Attempt any one of the following.

[10×1=10]

- i) Define blood pressure. Describe the regulation of blood pressure.
- ii) Draw the diagram of sarcomere. Explain briefly the mechanism of skeletal muscle contraction.

Printing Pages : 2

Paper Code : BOTT - 103

Roll No.

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B.Sc. (O.T. Technology)**(1st Year) EXAMINATION
MEDICAL BIOCHEMISTRY**

Time : 3:00 Hours]

[Max. Marks : 70

**Note:- All question are compulsory. Make diagrams wherever required.
Read the instructions carefully.**

1. Attempt any five MCQs. Select the correct choice. [2×5=10]

i) Factors affecting enzyme activity:

- a) Concentration of substrate b) pH
c) Temperature d) All of these

ii) Which of the following statements is not true for HMP shunt pathway:

- a) CO₂ is not produced in it b) NADPH is not produced
c) Does not produce ATP d) Both a and b

iii) The precursor for vitamins D is:

- a) Cholesterol b) Arachidonic acid
c) Triacylglycerol d) Phospholipids

iv) Normal range of serum urea is:

- a) 0.6-1.5 mg/dl b) 9-11 mg/dl
c) 20-40 mg/dl d) 60-100 mg/dl

v) Which of the following vitamin is required for collagen synthesis?

- a) Ascorbic acid b) Nicotinic acid
c) pantothenic acid d) Folic acid

vi) Energy currency of the cell is:

- a) High energy phosphate b) S-adenosyl methionine
c) Creatine phosphate d) Glucose 6-phosphate

2. Fill in the blanks. Attempt all.

[2×5=10]

- i) is a saturated fatty acid.
- ii) Full form of TPP is.....
- iii) & are bile pigments.
- iv) Cell membrane is mainly made up of..... &
- v) is a pentose sugar.

3. Write True or false. Attempt all.

[2×5=10]

- i) Galatose & mannose are two epimers of glucose.
- ii) Proteins are not amphoteric in nature.
- iii) Maltose, sucrose & lactose are intestinal digestive enzymes.
- iv) HDL & LDL are glycoproteins.
- v) Accumulation of acids in tissues lowers blood pH.

4. Attempt any four of the following.

[5×4=20]

- i) Diabetes Mellitus
- ii) Discuss electrophoresis in brief.
- iii) Phospholipids
- iv) Write short note on thyroid hormones.
- v) Biomedical importance of enzymes.

5. Attempt any two of the following.

[10×2=20]

- i) Describe sources, functions, deficiency manifestations and daily requirements of Vitamin A.
- ii) Define lipids, classify lipids with suitable examples and mention their functions.
- iii) Explain acid base disorders.

Printing Pages : 2

Paper Code : BOTT - 104

Roll No.

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B.Sc. (O.T)**(1st Year) EXAMINATION****INTRODUCTION TO O.T. TECHNOLOGY***Time : 3:00 Hours]**[Max. Marks : 70*

**Note:- All question are compulsory. Make diagrams wherever required.
Read the instructions carefully.**

1. Attempt all five MCQs. Select the correct choice. [2×5=10

i) Cholecystectomy means removal of

- | | |
|-----------------|-----------|
| a) Gall Bladder | b) Uterus |
| c) Kidney | d) Liver |

ii) Blood with vomiting is.....

- | | |
|----------------|-----------|
| a) Halmaturia | b) Melena |
| c) Hematemesis | d) None |

iii) NIBP stand for

- | | |
|---------------------------------|---|
| a) None invasive Blood pressure | b) None invasive intravenous pycelography |
| c) Both | d) None |

iv) Pulse rate below 60 beat per minute is.....

- | | |
|----------------|----------------|
| a) Bradycardia | b) Tachycardia |
| c) Arrhythmia | d) None |

v) Yellowish Discoloration of skin is called

- | | |
|-------------|-------------|
| a) Jaundice | b) Cyanosis |
| c) Anemia | d) None |

2. Fill in the blanks. Attempt all.

[2×5=10]

- i) Normal Blood pressure of Human body is.....
- ii) Full form of CSSD.....
- iii) Name of one blood Transfusion reaction is.....
- iv) Universal blood group is.....
- v) Inflammation of appendix is.....

3. Write True or false. Attempt all.

[2×5=10]

- i) Oxygen is a highly combustible gas.
- ii) Compression to ventilation ratio is 3:2.
- iii) Nasogastric tube for tracheal intubation.
- iv) History of drug allergy is a part of PAC.
- v) Adult CPR is performed by technician.

4. Attempt any four of the following.

[5×4=20]

- i) What are the antiseptic used in operation theatre usually.
- ii) What is dry heat sterilization?
- iii) Autologous blood transfusion.
- iv) Write about Laryngoscope.
- v) Pulse oximeter.

5. Attempt any two of the following.

[10×2=20]

- i) Ethics and behavior of staff in O.T.
- ii) How will you prepare the Trolley for spinal anesthesia.
- iii) Write in detail about hand hygiene in operation theatre.

Printing Pages : 3

Paper Code : BOTT - 105

Roll No.

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B.Sc. (O.T)**(1st Year 1st Sem.) EXAMINATION****COMPUTATIONAL SKILLS & BIOSTATICS***Time : 3:00 Hours]**[Max. Marks : 70*

Note:- All question are compulsory. Make diagrams wherever required.
Read the instructions carefully. Separate sheet for Separate section.

(Section A - Computational Skills) (36)**1. Attempt all. Select the correct choice. [3×2=6]**

- i) Which of the following memory is volatile.
 - a) RAM
 - b) ROM
 - c) EPROM
 - d) PROM
- ii) Which of the following terms is not used in local area network
 - a) Computer
 - b) Modem
 - c) Printer
 - d) Cable
- iii) The file extension of MS. Word document in office 2007 is?
 - a) .doc
 - b) .doc x
 - c) .pdf
 - d) .txt

2. Fill in the blanks. Attempt all. [2×3=6]

- i) Base of octal Number system is.....
- ii) Network of a computer Network is called.....
- iii) Arranging data in a particular order is known as.....

3. True or false. Attempt all. [2×2=4]

- i) Compiler converts high level language.
- ii) Fourth generation computer use integrated circuit.

4. Attempt any two of the following. [5×2=10]

- i) What do you mean by system tools? Explain briefly.
- ii) Write a short note on I/O devices.
- iii) Explain the block diagram of computer system.

$10 \times 1 = 10$

- ii) The following is a frequency distribution of height in cm.
- | Height | 150-155 | 155-160 | 160-165 | 165-170 | 170-175 |
|------------|---------|---------|---------|---------|---------|
| Frequency: | 4 | 19 | 31 | 23 | 3 |
- Obtain median

1. Attempt all. Select the correct choice. [2×2=4]

- 2. Fill in the blanks. Attempt all.** **[2×2=4]**

3. True or false. Attempt all. [2×3=6]

4. Attempt any two of the following. [5×2=10]

- ii) What is non-parametric test? Discuss χ^2 - test?

- iv) Give a brief note on hypothesis, testing of hypothesis and level of significance.

5. Attempt any one of the following.

- i) Mean haemoglobin level of 25 pre-school children was observed to be 10.6 gm/dl. With SD of 1.15 gm/dl. It significantly different from mean of 11.00 gm/dl. ($t_{0.05,24}=2.06$)

21/6/19

Printing Page(s) : 2

Paper Code : -BOTT-106 &BMLT-106
Roll No.

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B.Sc. O.T / (MLT)

1st Year Examination

GENERAL ENGLISH & COMMUNICATION SKILLS

Time : 3 Hours]

[Max. Marks : 70

Note: Attempt all questions.

1. Multiple choice questions (Write the correct answer only) [2×5=10]

- a. How Many parts of speech are there?
(i) Six (ii) five (iii) Seven (iv) Eight
- b. GD is.....
(i) Public speaking (ii) General Discussion
(ii) Group Discussion (iv) Great Discussion
- c. Listening is.....
(i)Hearing (ii) Attentive and careful listening
(iii) Natural hearing (iv) Physical hearing
- d. In which format of letter all the part start form the left?
(i)Block format (ii) Semi-block
(iii) Simplified (iv) None
- e. Etiquettes are:-
(i)Set Rules of good manners and behavior
(ii) Behavior
(iii) Bad manners
(iv) Gestures

2. Fill in the blanks: Attempt all with correct articles in bracket: [5×2=10]
(A, an, the)

- a. I am.....honest person.
b. She uses.....umbrella in sunlight.
c. Santa is.....funny character.
d. He saw.....baby girl in the jungle.
e. sun rises in the east.

3. Write true or false. Attempt all [2×5=10]

- a. Conjunctions are the words that combine sentences.
b. Role play is imitating or acting other's role.
c. Body language plays an important role in oral communication.
d. Report writing is a personal communication.
e. Personal letters are written for business and office.

4. Attempt any four of the following.

[5×4=20]

- Define sentence and kinds with example.
- What preparation a candidate must do for Interview?
- Discuss the 'Importance of body Language'?
- What is the difference between hearing and listening?
- Explain how internet is a medium of interaction with people all over the world.
- Define parts of speech and give the names of all the parts of speech.

5. Attempt any two of the following :

[10×2=20]

- Write letter to your father asking him to send 500 Rs. Extra money to buy an Anatomy book.
- Write a short note on 'Group Discussion.'
- What is report writing? What are the types of reports? Prepare a structure / format a report.
- Read the following passage carefully and answer the questions that follow-

Abraham Lincoln was born on February 12, 1809 in a log cabin in Kentucky. A cabin is small house made of wood. When he was seven years old, his family moved to Indiana. In 1803, the family moved to Illinois. As a boy, Abraham Lincoln loved books. He always borrowed books from his neighbors. He read them for a short time and then took them back to their owners. He grew very tall. He was 6'4" tall. He Weighed 180 pounds. Abe Lincoln Studies law in his free time. He was also interested in politics. He ran for political office. He lost 1832. Later, he elected to the Illinois legislature 4 times-in 1834, 1836, 1838, and 1840. People in the legislature make the laws. He became president of the United States in 1861. He was the 16th President of the U.S. There was a war between the North and the south in the U.S. It was the Civil War. Lincoln called men to fight for the North. The North won the war. There were slaves in the South. Slaves work for no money. They must Work. They are not free to do what they want. Lincoln set the slaves free in 1863. He let them go so they did not have to be slaves anymore. Lincoln is famous for that.

Questions:

- Where was Lincoln born?
- When did Lincoln move to Indiana?
- What did Lincoln do in his free time?
- How many times was Lincoln elected to the Illinois legislature?
- Abraham Lincoln was the.....president of the United States?