

I B.H.M.S. Examination, May 2002
PHYSIOLOGY INCLUDING BIOCHEMISTRY (Paper - I)

Date: 24-5-2002
Time: 10.30 a.m. to 1.30 p.m.

Total Marks: 100

Duration: 2 Hours 30 Minutes

Marks: 70

SECTION - B

2. Write briefly on any **three**: 15
- a) Oxygen dissociation curve.
 - b) Transport across cell membrane.
 - c) Olfactory path way.
 - d) Taste buds.
3. Answer the following - any two: 10
- a) Maturation factors for R.B.C.'s
 - b) Functions of white blood cells.
 - c) Factors affecting cardiac output.
4. Answer the following: 10
- a) Diastolic blood pressure.
 - b) Junctional tissues of heart.

SECTION - C

5. Define G.F.R. What are the factors affecting G.F.R. ? Describe how G.F.R. is measured ? 15
6. What is hypoxia ? Describe the types of hypoxias. 10
7. Describe the mechanism of accommodation in human eye ? 10

OR

Describe the regulation of body temperature.

Resistance is blood flow

① more in pulmonary

② less in systemic

120 mg

Name of the Examination: _____

Subject : _____

Section : A

Question Booklet Version
B 021

Roll No.

Answer Sheet No.

Question Booklet Sr. No.
300638

Date: _____

This is to certify that, the entries of Examination, Subject, Roll No. and Answer Sheet No. have been verified.

Candidate's Signature _____

Invigilator's Signature _____

INSTRUCTIONS TO CANDIDATES

- 1) This question booklet contains objective type questions.
- 2) The question paper and OCR Answer Sheet are issued separately at the start of the examination.
- 3) Candidate should carefully read the instructions printed on the question booklet and answer sheet and make correct entries on the Answer Sheet. As ANSWER SHEETS are designed to suit the OPTICAL CHARACTER READER (OCR) SYSTEM, special care should be taken to make correct entries. Special care should be taken to fill question booklet VERSION and SERIAL NO., Roll No. accurately. The correctness of entries has to be cross-checked by the invigilator. The candidate must sign on the Answer Sheet and question booklet.
- 4) During the time of examinations:-
 - a) Read each question carefully.
 - b) Determine the correct answer from out of the four available options given under each question.
 - c) Cross 'X' in the correct block below the question number in the answer sheet with Blue Ball Point Pen only. e.g.

Q. No. 13 : The product of 0.5×0.05 is
(Question Booklet)

- (a) 0.05
- (b) 0.005
- (c) 0.025
- (d) 0.25

Q. No.

	11	12	13	14
a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thus as the correct answer is 'c' the candidate should cross the block corresponding to 'c' under Question No. 13 on the answer sheet.

- 5) Rough work should be done only on the blank space provided on the question booklet. **Rough work should not be done on the Answer Sheet.**
- 6) Immediately after the prescribed examination time is over, the answer sheet and the question booklet is to be returned to the invigilator after both the candidate and invigilator have signed.
- 7) **No candidate is allowed to leave the examination hall till the examination session is over.**

P.T.O.

I B.H.M.S. Examination, May 2002
PHYSIOLOGY INCLUDING BIOCHEMISTRY (Paper - I)

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Total Marks: 100

SECTION - A

Multiple Choice Questions

Marks: 30

Instructions: Cross only one block for correct answer.

1. Blood group antigen are
 - a) Carried by sex chromosomes ✓
 - b) Attached to plasma proteins
 - c) Attached to haemoglobin molecule
 - d) Found in saliva
2. The commonest site of haemopoiesis in foetus is
 - a) Liver
 - b) Spleen ✓
 - c) Bone marrow
 - d) Gut
3. Internal respiration occurs
 - a) Between atmosphere and blood
 - b) In between tissue blood capillaries and tissue cells ✓
 - c) In bronchi and trachea
 - d) In the lungs
4. Mucous membranes of the nasal passages pharynx and trachea are lined with what type of epithelium
 - a) Striated columnar
 - b) Simple Squamous
 - c) Simple columnar
 - d) Pseudo stratified ciliated columnar ✓
5. In asphyxia there is
 - a) Only oxygen lack
 - b) Only carbon-di-oxide lack
 - c) Only carbon - di-oxide excess
 - d) Oxygen lack with carbon-di-oxide excess ✓
6. Bleeding time is prolonged in
 - a) Anaemia
 - b) Purpura ✓ *thrombocyte defect*
 - c) Hemophilia
 - d) None of these
7. Incidence of RH positive persons in India is
 - a) 10%
 - b) 20%
 - c) 50%
 - d) Around 85% ✓
8. Erythropoietin is increased in
 - a) Blood loss
 - b) High altitude
 - c) Exercise
 - d) All of the above ✓

9. Stuart Prower factor is factor
 a) VIII ^{Hemophilic} b) IX ^{Prothrombin} ~~c) X~~ d) XII
10. Haemoglobin first appears in
 a) Early normoblast b) Intermediate normoblast ✓ c) Late normoblast d) Pronormoblast
11. Body temperature regulating center is situated in
 a) Anterior thalamic nuclei b) Lateral lemniscus c) Hypothalamus ✓ d) Limbic system
12. During hot weather the only heat loss mechanism is
 a) Sweating ✓ b) Shivering c) Decreased thyroxine secretion d) Thermogenesis
13. Olfactory primary sensations are the following EXCEPT
 a) Etheral b) Pungent c) Huskey ✓ d) Pepperminty
14. Following are the refractive media of the human eye EXCEPT
 a) Cornea b) Lens c) Vitreous body ✓ d) Retina ✓
15. Following are the factors affecting net rate of simple diffusion in the body EXCEPT
 a) Thickness of the membrane b) Lipid solubility ✓ c) Temperature ✓ d) Concentration of carrier systems.
16. Bradycardia means
 a) Increase in pulse rate b) Decrease in pulse rate ✓ c) Increase in pulse pressure d) Decrease in pulse pressure
17. 'T' wave of E.C.G. is due to
 a) Depolarisation of auricles b) Repolarisation of ventricles ✓ c) Diastole of auricles d) Ventricular systole
18. In normal electrocardiogram 'P' wave is due to
 a) Depolarization of atria ✓ b) Repolarization of atria c) Depolarization of ventricle d) Repolarization of ventricle
19. Erythrocyte size in healthy adult human is ^{7.5}
 a) 10 - 12 microns b) 7 - 8 microns ✓ c) 4 - 6 microns d) 1 - 2 microns
20. Oxygen therapy is most useful in
 a) Anaemic hypoxia b) Histotoxic hypoxia c) Stagnant hypoxia d) Hypoxic hypoxia ✓
21. Life of RBC's is
 a) 30 days b) 90 days c) 120 days ✓ d) 160 days
22. In hemophilia
 a) Factor II is decreased b) Bleeding time is increased c) Clotting time is increased ✓ d) Prothrombin time is increased

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4 ✓

23. During exercise, blood does not decrease in
 a) ~~Cutaneous circulation~~ ✓ c) Coronary circulation
 b) ~~Hepatosplanchnic circulation~~ d) Renal circulation
24. Hepatic blood flow is
 a) 500 ml/min c) 1200 ml/min
 b) 800 ml/min d) 1500 ml/min
25. After liver and kidney the blood flow is maximum in
 a) ~~Brain~~ ✓ c) Skin
 b) ~~Skeletal muscle~~ d) Hear muscle
26. The volume of dead space air in adult is
 a) 100 ml. b) 150 ml. ✓ c) 250 ml. d) 500 ml.
27. The normal amount of urine excreted in 24 hours in adult is
 a) 100 ml. b) 500 ml. c) 1500 ml. ✓ d) 1000 ml.
28. The reaction of adult urine is normally
 a) ~~Acidic~~ ✓ b) Alkaline c) Neutral ✓ d) None of these
29. In kidney the phosphate buffer is most effective in
 a) ~~Proximal tubule~~ ✓ b) Descending limb of loop of Henle
 c) Ascending limb of loop of Henle
 d) Distal nephron
30. Mechanism of Na^+ reabsorption in 2nd part of proximal tubule is
 a) ~~Antiport~~ c) Uniport
 b) Chloride driven Na^+ transport d) Na^+ - CO_2 - transport

SPACE FOR ROUGH WORK