



বিদ্যাসাগর বিশ্ববিদ্যালয়
VIDYASAGAR UNIVERSITY
Question Paper

B.Sc. Honours Examinations 2022

(Under CBCS Pattern)

Semester - IV

Subject : PHYSIOLOGY

Paper : SEC 2-T

Full Marks : 25

Time : 2 Hours

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Computer Application in Health Science

Group-A

Answer any *two* of the following questions :

5×2=10

1. What are super computers? What is application program? Name a computer language. 2+2+1
2. What is known about the different components of a computer (hardware)? 5
3. Write briefly about application of computer assisted imaging techniques used in medical diagnosis. What is CT scan? 4+1

P.T.O.

Group-B

Answer any *one* of the following questions :

15×1=15

4. Write briefly on the use and applications of internet in research and learning. What is an 'e-mail'? What are the different types of graphical representations of data using excel? 5+2+8
5. Give a brief account of the application of computer in physiology and medicine. What is operating system? Give an example. 10+4+1

Or,
Paper - SEC 2-T
Physiological Techniques and Public Health Assessments

Full Marks : 25

Time : 2 Hours

Group-A

Answer any *two* of the following questions :

5×2=10

1. What is audiometry? What are its applications? Write down the principle of EMG?
2+1½+1½
2. Write short notes on : (i) reaction time and (ii) ECG 2+3
3. What do you know about growth curve? What is BMI? Write its unit and use.
3+1+1

Group-B

Answer any *one* of the following questions :

15×1=15

4. Write a brief note on Valsalva maneuver. What is perimetry? What is the physiological significance of deep breathing test?
5+5+5
5. What are the risk factors of over weight and obesity? Write a brief note on the use of weight-for-age and height-for-age growth curves for assessment of wasting and stunting.
7+8

Or,
Paper - SEC 2-T
Histopathological Techniques

Full Marks : 25

Time : 2 Hours

Group-A

Answer any *two* of the following questions : 5×2=10

1. What is karyotyping? State its advantages. 5
2. Differentiate between stain and dye, citing examples of each type. What is mordant? 3+2
3. Outline the basic principles and procedure of Eosin-Haematoxylin staining. 5

Group-B

Answer any *one* of the following questions : 15×1=15

4. Define honing and stropping. How many types of fixatives are there? Cite examples of each type, mentioning its individual mechanism of action. Give examples of different types of mounting media. (2+2)+(2+2+4)+3
5. What is meant by histochemistry? State the advantages and limitations of histochemistry. Compare the histochemistry of enzymes and pigments. (3+4)+(4+4)

Or,
Paper - SEC 2-T
Sports Medicine and Nutritional Physiology

Full Marks : 40

Time : 2 Hours

Group-A

Answer any **four** of the following questions :

5×4=20

1. Write the role of sports physician in sports medicine.
2. How are sports injuries classified?
3. Discuss the role of ice in treatment of sports injuries.
4. Discuss about the nutritional factors affecting athletic performance?
5. Do the nutritional needs differ between an athlete and non athlete?
6. Discuss the clinical application of heat modalities.

Group-B

Answer any **two** of the following questions :

10×2=20

7. Write down the aims and objectives of sports medicine. What is the importance of sports medicine in games and sports? 5+5
 8. What are the causes of sports injuries? Discuss the preventive measures that can prevent sports injuries. 2+8
 9. Is protein the most important macronutrient for athlete?—explain. How much carbohydrate should an athlete consume? Discuss briefly about Whirlpool bath. 5+2+3
 10. Plan and prepare a diet for sports person suffering from anemia. What is transcutaneous electrical nerve stimulation (TENS). 8+2
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