

2022

HUMAN PHYSIOLOGY

[P.G.]

(M.Sc. Fourth Semester End Examination-2022)

PAPER- PHY401

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks

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

Illustrate the answers wherever necessary

UNIT – 33

YOGA AND STRESS PHYSIOLOGY

- A. Answer any two questions from the following: 2x2= 4**
1. What is meant by high altitude acclimatization? 2
 2. Give examples of two classical anti-oxidants. 2
 3. Define stress and mention its types. 2
 4. State the relation of yoga with functions. 1+1
- B. Answer any two questions from the following: 2x4 = 8**
1. Write down the adverse effects of ionizing radiation on human health.
 2. What are anti-stressors and pro-stressors? 2+2

(2)

3. What are Meteorites? What is relative humidity? 2+2
4. What are ROS and RNS? Give examples. 2+2

C. Answer any one questions of the following: 1x8 = 8

1. a) Discuss the ameliorative role of any one antioxidant.
b) How do cells respond to stress?
c) What is acceleration?
2. a) Briefly state the role of yoga in enhancing immunological response.
b) Give a brief description of nutritional difficulties of space fighters in space. 4+4

UNIT – 34

MODERN TECHNIQUES IN PHYSIOLOGY

A. Answer any two questions from the following: 2x2= 4

1. What is 'Transcriptomics'?
2. State the concept of Omics.
3. Write briefly about FISH.
4. What is quantam dot?

B. Answer any two questions from the following: 2x4 = 8

1. Briefly discuss the principle and applications of PCR.
2. What is allotrope? Give examples of any two types of gold nanoparticle.

(3)

3. Write down the principle and applications of AFM technique.(with proper diagram)
4. What is proteomics? Classify proteomics according to strategies.

C. Answer any one questions of the following: 1x8 = 8

1. a) Write down the principle of affinity chromatography.
b) How DNA can be used as an excellent nanoconstruction material depending on its inherent merits.
c) What is scanning tunnelling microscopy (STM)? 2+4+2
2. a) How nanotechnology can be applied in tissue-engineering?
b) Write the principle of flow-cytometry.
c) What is dendrimer? 3+3+2