

TDP (General) 1st Semester Exam., 2017

## HUMAN PHYSIOLOGY

( General )

FIRST PAPER

Full Marks : 40

Time : 2 hours

The figures in the margin indicate full marks  
for the questions

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

1. (a) (i) What is active transport? Give an example.
- (ii) Discuss about different phases of cell cycle.
- (iii) Write down the differences between mitosis and meiosis. (1+1)+4+4=10

Or

- (b) (i) Describe the structure and function of endoplasmic reticulum.
- (ii) Write down the names of different joints and their functions in human body.
- (iii) Define necrosis. (3+2)+(2+2)+1=10

( Turn Over )

( 2 )

2. (a) (i) How does pH differ from cH? What do you mean by 'homeostasis'?
- (ii) What is 'surface tension'? Mention its physiological importance.
- (iii) Write down the basic principle of electrophoresis. (2+2)+(1+2)+3=10

Or

- (b) (i) What are protective colloids? State its physiological importance.
- (ii) Discuss the major biological applications of radioisotopes.
- (iii) Write down four radiation hazards on human subject. (1+1)+4+4=10

3. (a) (i) What is 'purpura'?
- (ii) Mention how hypoxia and vitamin B<sub>12</sub> influence erythropoiesis.
- (iii) Mention four precautionary measures to be taken before blood transfusion. 2+4+4=10

Or

- (b) (i) What is ESR? Mention its physiological significance.

(ii) What is oedema? Mention its causes.

(iii) Define MCV and MCHC. Write down the physiological significance of bleeding time.  $(1+2)+(1+2)+(2+2)=10$

4. (a) (i) What is isozyme? Give an example.

(ii) What are glycosides? Write their physiological importances.

(iii) Classify proteins with examples.  $2+(2+2)+4=10$

Or

(b) (i) What do you mean by rancidity of fat?

(ii) What is covalent modification? Define  $K_m$ .

(iii) Describe the chemical structure and function of cholesterol.  $2+(2+1)+(2+3)=10$

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