

M.Sc. 1st Semester Examination, 2019

CND

PAPER – CND-101

Full Marks : 40

Time : 2 hours

*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

1. Answer any *four* questions of the following : 2×4
 - (a) What do you mean by regulatory part of fixed model receptor ?
 - (b) Write the full form of JAK-STAT pathway.
 - (c) Write any two features of non-genomic signal transduction of membrane bound receptor.

- (d) What are the major two sensors for growth assessment of intrauterine baby ?
- (e) What do you mean by foam cells ?
- (f) What is hereditary retinoblastoma ?
- (g) Write the name of two antiapoptotic factor.
- (h) What causes the chronic myelogenous leukemia (CML) ?

2. Answer any *four* of the following : 4 × 4

- (a) Describe the basic difference between growth and development. Write any two milestone of infantile development. 2 + 2
- (b) What is glycogen loading ? Write the technique of glycogen loading for performance enhancement of athletes. $1\frac{1}{2} + 2\frac{1}{2}$
- (c) "Oxidative stress interfere reproductive ability" – Justify the statement. 4
- (d) "Nutrients modulate Cardiovascular activities" – Justify. 4

- (e) Write in brief the role of mobile model on gene expression. 4
- (f) Discuss about the distinctive properties of cancerous cell. 4
- (g) Write the role of nutrients in Endurance performance. 4
- (h) Discuss the role of hormones on exercise. 4

3. Answer any *two* of the following : 8 × 2

- (a) Describe the tyrosine kinase signal transduction pathway for modulation of cellular activities. What is MAP kinase pathway ? 6 + 2
- (b) Discuss the Gs - Gi cyclical rotation in mobile model receptor. Write the non-genomic pathway of cAMP signal transduction pathway. 4 + 4
- (c) Why is cancer development considered as 'multistep process' ? What is the role of phytochemicals in nutritional management of cancer ? 4 + 4

(d) What are ergogenic aids ? Classify different types of ergogenic aids. How does erythropoetin induce performance in sports ? Mention the side effects of using anabolic steroid.

2 + 2 + 2 + 2
