

Madhya Pradesh Medical Science University, Jabalpur
Post Graduate Degree Examination (Medical Faculty) July-2020

Paper Code – 20AM0117100551

Subject – Physiology

Paper - I

Time : 3 Hours

Maximum Marks : 100

Instructions:

- 1) Draw diagrams wherever necessary.
- 2) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper, otherwise the question shall not be valued
- 3) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.

1. Long Answer Question (Any Two)

2 X 20 = 40

- a. What is ageing? Describe various theories of Ageing & Physiological Changes in Body.
- b. Describe the various mechanism of cell to cell Signaling giving classical examples.
- c. Describe characteristics of open and closed circulatory System and discuss their advantages and disadvantages.

2. Write in Brief (Any Six)

6 X 10 = 60

- a. Reverse Transcriptase polymerase chain reaction.
- b. Null hypotheses.
- c. Galen's contribution to Physiology.
- d. Klinefelter syndrome.
- e. Discuss the factors influencing the flow of fluid through a Tube.
- f. Calcium as secondary messenger.
- g. Apoptosis.
- h. Excitation Contraction Coupling.

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Paper - II

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1. Long Answer Question (Any Two)

2 X 20 = 40

- a. Describe mechanism of pulmonary ventilation & its regulation.
- b. What is the significance of arteriolar tone & describe how it is regulated.
- c. Describe about digestion and absorption of fats, carbohydrates and proteins.

2. Write in Brief (Any Six)

6 X 10 = 60

- a. Discuss recent concept in Creatinine Clearance Test.
- b. Metabolic changes during starvation.
- c. Nerve growth factor.
- d. Counter Current mechanism.
- e. Functions of Saliva.
- f. Migrating Motor complex.
- g. pH changes along nephron.
- h. Decompression sickness.

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Paper - III

Time : 3 Hours

Maximum Marks : 100

Instructions:

- 1) Draw diagrams wherever necessary.
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- 3) Do not write anything on the blank portion of the question paper- such type of act will be considered as an attempt to resort to unfair means.

1. Long Answer Question (Any Two)

2 X 20 = 40

- a. Describe the role of hormones in physiology of growth
- b. Postural reflexes
- c. Describe the role of organ of Corti in hearing

2. Write in Brief (Any Six)

6 X 10 = 60

- a. Fetal circulation
- b. Evoked potential
- c. Schematic eye
- d. Nystagmus
- e. Horner's syndrome
- f. Myxedema
- g. Implicit & explicit memory
- h. Precocious puberty

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Paper – IV

Time : 3 Hours

Maximum Marks : 100

Instructions:

- 1) Draw diagrams wherever necessary.
- 2) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper, otherwise the question shall not be valued
- 3) Do not write anything on the blank portion of the question paper-such type of act will be considered as an attempt to resort to unfair means.

1. Long Answer Question (Any Two)

2 X 20 = 40

- a. Discuss the mechanism involved in the process of detoxification.
- b. Describe the cardiovascular adjustment of exercise in man. What is the effect of physical training on their adjustment.
- c. Discuss the neuro – endocrine response of starvation.

2. Write in Brief (Any Six)

6 X 10 = 60

- a. What are the educational objectives according to Bloom's taxonomy?
- b. Methods of stress management.
- c. What are the principles of medical ethics ?
- d. Apoptosis.
- e. DNA finger printing.
- f. COVID – 19.
- g. Role of computers in medicine.
- h. Discuss the Physiological Basis of Ageing.