

MediCit INSTITUTE OF MEDICAL SCIENCES

Ghanpur (Village), Medchal (Mandal), Medchal – Malkajgiri Dist. 501 401

I-MBBS FIRST INTERNAL ASSESSMENT EXAMINATION, JUNE 2021

PHYSIOLOGY

Time & Duration : **10 AM to 12 45 PM**

Max. Marks : **80**

- Answer all the questions.
- Draw diagrams where necessary.
- Marks are stated in the parenthesis.
- Answer the questions in a sequential order.

Essay questions:

(2 x 15 = 30)

(2+1+5+5+2)

1. A 43 years male patient reported to hospital with characteristic features of centripetal distribution of body fat with buffalo hump, thinning of extremities and purple stria.
 - a) Diagnose this condition.
 - b) What is the probable cause for the same?
 - c) Mention briefly about its mechanism of action and its regulation.
 - d) Discuss the physiological actions of the hormone involved.
 - e) Explain the physiological basis for the appearance of the above mentioned features.

2. In a patients with severe covid 19 disease there can be a complication of formation of blood clots in various organs like heart, kidney, lungs, and in the limb vessels. **(5+3+2+3+2)**
 - a) Explain the mechanisms of blood coagulation.
 - b) Describe the fibrinolytic system in the body and its significance.
 - c) Explain clot retraction.
 - d) Write briefly about intrinsic and extrinsic anti coagulants.
 - e) Why is blood clotting abnormal in i) vitamin K deficiency ii) liver diseases.

Write short notes on the following

(7 x 5 =35)

3. Summarise the effects of calcitonin, parathormone, vitamin D, growth hormone and glucocorticoids on calcium metabolism.

4. a) Discuss the actions of vasopressin and its mechanism of action. **(3)**
b) Write about the factors affecting ADH secretion. **(2)**

5. a) Hazards of blood transfusion. **(3)**
b) Write a note on Cross matching. **(1)**
c) Explain why blood stored in the blood bank should be transfused / used within 2 weeks. **(1)**

6. a) Explain the role of platelets in hemostasis. **(4)**
b) Explain the role of aspirin in preventing myocardial infarction and stroke. **(1)**

7. a) What is the cause of Erythroblastosis fetalis? **(3)**
b) Explain the role of Anti D antibody injection in its prevention. **(1)**
c) Add a note on exchange transfusion. **(1)**

Contd....2...

8. Classify Anemia and determine the type of anemia from the following blood reports.

a) Report 1

RBC count 2.1million/cu.mm

Hemoglobin 7.2 gms%

MCV 110 ftl

RCW 38%.

b) Report 2

RBC count 2.9 million /cu.mm

Hemoglobin 6gms%

MCV 55 FTL

RCW 25%

Add a note on the cause of the anemia in each of the above mentioned reports .

9. Discuss the physiological effects of insulin on liver, skeletal muscle and adipose tissue.

Write brief on the following

(5 x 3 = 15)

10. a) Why is action potential triggered only when the membrane potential reaches the firing level?
b) Why does the lowering of the ECF calcium concentration leads to tetany?
11. What is neuro endocrine reflex and explain it with examples?
12. Functions of helper Tcells.
13. Explain briefly about the mechanisms of natural immunity in the body?
14. A dead body in a state of extreme rigidity is found by police. What is the condition called?
Give its physiological basis