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Enrolment No:	


UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Theory Examination, June 2021

Course: Pathophysiology Program: B.Pharm Course Code: BP 204T Instructions: Read the Question Paper Carefully.	Semester: II Time 03 hrs. Max. Marks: 75
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SECTION A

S. No.	CO	Multiple Choice Questions (20X1) or Objective type Questions (10X2)	Ma rks
Q1			20
1	CO1	Low level of oxygen in blood is known as..... a) Anemia b) Hypoxia c) Hypercapnia d) Cyanosis	1
2	CO2	Quantitative abnormalities of polypeptide globin chain synthesis in hemoglobin leads to a. Thalassaemia b. Haemophilia c. Haematuria d. Polycythaemia	1
3	CO4	Migration of cancerous cells from the site of origin to other parts of the body, forming secondary tumors is known as a) Diapedesis b) Metastasis c) Proliferation d) None of above	1
4	CO3	Alteration in urine volume to < 50 ml/day, is known as a. Oliguria b. Non oliguria c. Anuria d. Hyperuria	1
5	CO5	Choose the correct statement about acute inflammation. Statement A: Acute inflammation process is mediated by immune cells, important cell-signaling proteins called cytokines, and other small molecules. Statement B: The clinical examples of acute inflammation are Abscesses (brain; skin), allergic reaction (anaphylaxis). a. Statement A is correct b. Statement B is correct c. Both the Statement A and B are wrong d. Both the Statement A and B are correct.	1
6	CO2	Following are the causes of cell injury except a. Oxygen deprivation b. Infectious agents c. Immunologic reactions d. Red blood cells	1

7	CO1	The reversible change where one cell type (epithelial or mesenchymal) is replaced by another cell type is known as a. Hyperplasia b. Metaplasia c. Hypertrophy d. Atrophy	1
8	CO3	Which of the following are the clinical features of asthma? a. Paroxysm of dyspnea b. Coughing and wheezing c. Sputum demonstration of charcot leyden crystals and cruschmann spirals d. All of the above	1
9	CO4	Which of the following test is used for the diagnosis of typhoid? a. VDRL Test b. Widal Test c. Schick Test d. None of the above	1
10	CO5	Choose the correct statement about tumours. Statement A: All tumours benign as well as malignant have two basic components i.e. “Parenchyma and supportive stroma”. Statement B: “Supportive stroma” is composed of fibrous connective tissue and blood vessels; it provides the framework on which the parenchymal tumour cells grow. a. Statement A is correct b. Statement B is correct c. Both the Statement A and B are wrong d. Both the Statement A and B are correct.	1
11	CO1	The branch of science dealing with the study of neoplasms or tumours is known as	1
12	CO2	In case of osteoarthritis, which of the following morphological features of synovial joint are observed? a. Flattened articular end b. Osteophytes (Spurs) c. Reduced joint space d. All of the above	1
13	CO3	In rheumatoid arthritis disease, the triggering events which initiates destruction of articular cartilage include a. Existence of an infectious agents such as mycoplasma, cytomegalo virus etc. b. Role of human leukocyte antigens in initiation of immunologic damage c. Both a and b d. None of the above	1
14	CO4	Vitamin B 12 in food is released and forms a stable complex with gastric R-binder. R-binder is a form of a. Glycoprotein b. Glycolipid c. Fat d. Phospholipid	1
15	CO5	Choose the correct statement about Statement A: In hemolytic anemia of autosomal inheritance, the red cell membrane is abnormal. Statement B: The pathogenesis of hemolytic anemia involves mutation in one type of proteins that anchor the lipid bilayer to the underlying cytoskeleton. The proteins are spectrin and ankyrin.	1

		<ul style="list-style-type: none"> a. Statement A is correct b. Statement B is correct c. Both the Statement A and B are wrong d. Both the Statement A and B are correct. 	
16	CO1	Increase in Pulmonary pressure results fluid in alveoli, that condition is known as	1
17	CO2	The common features of Chronic Obstructive Pulmonary Disease include: <ul style="list-style-type: none"> a. Chronic bronchitis b. Emphysema c. Both a and b d. None of the above 	1
18	CO3	The major risk factors associated with Type II Diabetes Mellitus are <ul style="list-style-type: none"> a. Cardiovascular diseases b. Females with PCOD c. Dyslipidemia d. All of the above 	1
19	CO4	Identify the disease 	1
20	CO5	Choose the correct statement about Statement A: Gout can be classified into two types i.e. Primary and Secondary Statement B: Primary gout is due to either increased purine biosynthesis or a deficiency of glucose-6-phosphatase whereas secondary gout includes number of enzyme defects in purine metabolism. <ul style="list-style-type: none"> a. Statement A is correct b. Statement B is correct c. Both the Statement A and B are wrong d. Both the Statement A and B are correct. 	1

SECTION B

Long Answers (Answer two out of 3) 2X10

Q2			20
1	CO1, CO2, CO5	<p>P.A. is a 52-year old man who presented with a 2-week history of polyuria, polydipsia, polyphagia, weight loss, fatigue, and blurred vision. A random glucose test performed one day before presentation was 352 mg/dl. The patient denied any symptoms of numbness, tingling in hands or feet, dysuria, chest pain, cough or fevers.</p> <ul style="list-style-type: none"> a. Identify the disease associated with the symptoms. (1 marks) b. What are the possible etiological factors behind this disease? (3 marks) c. Mention the other symptoms associated with the disease. (3 marks) d. What are the diagnostic tests for the disease? (3 marks) 	10
2	CO1, CO2, CO5	<p>A 39-year-old white man, working as a house builder, was admitted to pulmonary ward in May 2021 with an eleven-month history of persistent wheezing, heard not only during auscultation but also by patient himself. This wheezing had no correlation with physical exertion. He also reported a few episodes of hemoptysis within last 7 months and dry cough for about a month. Patient's weight was 81.5 kg, his height was 180 cm.</p> <ul style="list-style-type: none"> a. Identify the disease associated with the symptoms. (1 marks) b. What are the possible etiological factors behind this disease? (3 marks) c. Mention the other symptoms associated with the disease. (3 marks) 	10

		d. What are the diagnostic tests for the disease? (3 marks)	
3	CO1 CO2, CO5	A 41-year-old male admitted to a hospital with chief complaints of shortness of breath, lower extremity swelling, nausea, vomiting, diarrhea, altered taste sensation, and decreased urine output. The laboratory findings shows RBC count: $2.83 \times 10^{12}/L$, hemoglobin: 7.9 g/dl, BUN (Blood Urea Nitrogen): 154 mg/dl, GFR is less than 10 ml/min. a. Identify the disease. (1 marks) b. What chief complaints and laboratory findings indicates the disease conditions? (3 marks) c. What is the reason why there is decline in RBC count and increase in BUN? (4 marks). d. What is the complication of the disease? (2 marks)	10

SECTION C

Short Answers (Answer 7 out of 9) 7X5

Q3			35
1	CO1	Depending upon the stimuli initiating bronchial asthma, there are two etiological types i.e. Extrinsic (allergic or atopic) and intrinsic (idiosyncratic and non-atopic). Mention any five features of both the classes.	5
2	CO2	In order to maintain normal cardiac output, several compensatory mechanisms plays an important role. Discuss any two compensatory mechanism involved.	5
3	CO3	Chronic Renal Failure is a progressive, irreversible deterioration in renal function. Mention characteristic features of different stages of chronic renal failure.	5
4	CO4	Name one chronic degenerative disease related to CNS. Mention any five warning signs of that degenerative disease.	5
5	CO5	As per revised WHO guidelines 2002, what are the etiological factors responsible in causing seizure? Enlist any five factors with examples.	5
6	CO3	Vitamin B 12 acts as a coenzyme in two main biochemical reactions in the body. Explain the reactions with coenzymes.	5
7	CO4	Several abnormalities of red cells may be found in different Haematological disorders. Discuss any five red cell morphologic abnormalities along with their characteristic features.	5
8	CO3	Elaborate the type of function performed by leukocytes during Inflammation process.	5
9	CO2	Explain the role of proto-oncogenes and tumour suppressor genes in cell cycle and how it causes tumour formation.	5
		Total	75