

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, Dec 2021

Course: Remedial Biology	Semester: I
Program: B.Sc. Micro/Clinical/Nutrition/Biotech/Food Tech	Time 03 hrs.
Course Code: BP106RBT	Max. Marks: 100

Instructions: Read the paper carefully. All sections are compulsory

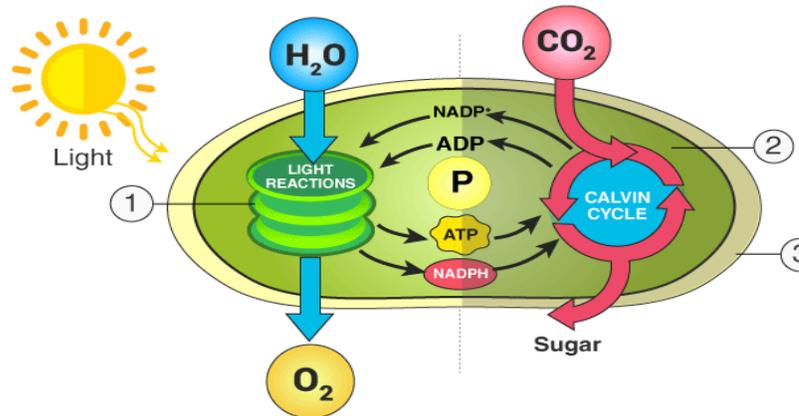
SECTION A

S. No.	MCQs or Fill in the blanks (1.5 marks each)	30 Marks	CO
1	Charles Darwin's theory of natural selection was given in the year of a) 1850 b) 1855 c) 1859 d) 1860	1.5	CO1
2	Which of the following are part of root? a) Root cap b) conical c) fusiform d) Napiform	1.5	CO1
3	Which of the following are underground modifications of stems? a) Tuberos b) Root hairs c) Rhizome d) Annulated	1.5	CO1
4	Artificial system was adopted by Swedish naturalist, Carolus Linnaeus a) True b) False	1.5	CO1
5	Percentage of Blood Plasma contributes about.....of total blood a) 10% b) 55% c) 75% d) 45%	1.5	CO2
6	The respiratory system is made up of trachea, the lungs and the _____ a) Diaphragm b) Pancreas c) Esophagus d) Liver	1.5	CO2
7	Conversion of blood from liquid to gel is known as a) Digestion of proteins b) Breaking down of nucleic acids	1.5	CO2

	c) Coagulation d) Phagocytosis		
8	The pH of saliva is a) 9 b) 8 c) 7.5 d) 6.8	1.5	CO2
9	Which of the following is major part of nephron? a) Renal pelvis b) Pyramid c) Renal tubule d) Hilum	1.5	CO3
10	Central nervous system comprises of a) Spinal cord b) Autonomic c) Somatic d) Peripheral	1.5	CO3
11	Human sperm moves with the help of _____ a) Cilia b) Flagellum c) Basal body d) Nucleosome	1.5	CO3
12	The hormone that controls the level of calcium and phosphorus in blood is secreted by____ a) Thyroid gland b) Parathyroid gland c) Pituitary gland d) Thymus	1.5	CO3
13	Which of the following nutrient promotes vigorous vegetative growth, builds up plant proteins and chlorophyll a) Potassium b) Sulphur c) Nitrogen d) Phosphorous	1.5	CO4
14	Formation of growth hormone like indole acetic acid is due to a) Potassium b) Zinc c) Boron d) Phosphorous	1.5	CO4
15	Nitrogen fixation is the process by which atmospheric nitrogen gas is converted into salts of nitrogen such as, ammonia, nitrate and nitrogen dioxide a) True b) False	1.5	CO4
16	The loss of water in the form of water vapor from the aerial parts of the plant is known as....._____	1.5	CO4

17	How much percentage of water loss from the leaf during stomatal transpiration? a) 97% b) 90% c) 98% d) 99%	1.5	CO5
18	The non-living substances produced by plant metabolism is a) Starch b) Ergastic Substances c) Secretory substances d) Reserve Products	1.5	CO5
19	Group of cells which are dividing or have capacity to divide and redivide are known as a) Permanent b) Simple tissue c) Compound tissue d) Meristematic tissue	1.5	CO5
20	Food is stored in which of the following tissues of plants a) Collenchyma b) Parenchyma c) Sclerenchyma d) Xylem	1.5	CO5
SECTION B 20 marks 4 questions 5 marks each			
Q	Short Answer Type Question (5 marks each) Scan and Upload 4 questions 5 marks each	20 Marks	CO
1	Define Ergastic substances of plant. Discuss in brief about Ergastic Products of plant cell.	1+4	CO5
2	Define Respiration and briefly explain mechanism of respiration.	1+4	CO2
3	Write in brief physiology of urine formation	5	CO3
4	Describe in brief the implication of dark reactions in photosynthesis	5	CO4
SECTION C 30 marks			
Q	Two case studies 15 marks each subsections	30 Marks	CO
1	Case study 1	2+10+3	CO4

LIGHT REACTION AND DARK REACTION

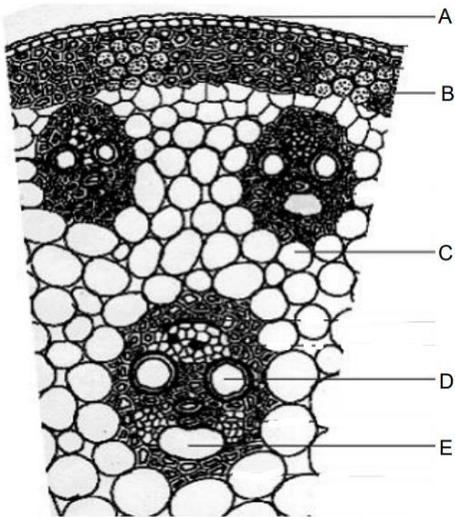


① Thylakoid | ② Stroma | ③ Chloroplast

- Explain the role of thylakoid, stroma and chloroplast
- Explain in detail end products formed in light and dark reaction along with energy utilization

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Case Study 2



- Identify the plant structure from the above figure with proper justification
- Identify A, B, C, D and E in the above plant structure
- Differentiate between D and E

3+5+5

CO5

SECTION- D 20 marks

Q	Long Answer type Questions Scan and Upload (10 marks each)	20 Marks	Cos
1	Describe the location and role of parathyroid and thymus gland	10	CO3
2	Give an account on plant kingdom and its classification	3+7	CO1