

Computer Based Examination System

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Title*

Question Paper Answer Key

OES Exam*

GPSC06202208 / Assistant Professors in Government College in Zoology/ Completed / 2022-10-01

Question Description	JBS Haldane said “ I am prepared to lay down my life on behalf of four grand-children or eight first cousins” What he meant was
A	It is not just the degree of relatedness that matters but the number of relatives that are helped
B	Helping a large number of distant relatives be just as beneficial as helping a direct offspring
C	Altruism
D	All the options
E	None of the above
Correct Answer	D
Marks	1

Question Description	Testosterone producing cells are called:
A	Sperm cells
B	Leydig cells
C	Somatic cells
D	Sertoli cells
E	None of the above
Correct Answer	B
Marks	1

Question Description	The DNA code is:
A	unique to humans
B	found only in mammals
C	shared by all living things
D	All of the above
E	None of the above
Correct Answer	C
Marks	1

Question Description	Isoelectric point is the pH at which a molecule has:
A	Positive charge
B	Negative charge
C	No charge
D	Infinite charge
E	None of the above
Correct Answer	C
Marks	1

Question Description	Embryological evidence for evolution was proposed by
A	Ernst Heckel
B	Charles Darwin
C	Alfred Wallace
D	Sachin Darwin
E	None of the above
Correct Answer	A
Marks	1

Question Description	What is the lime requirement of a pond, 20g of whose dried mud decreases the pH of 20mL of p-nitrophenol buffer from 8.0 to 7.2?
A	5570 kg/Ha
B	4480 kg/Ha
C	5000 kg/Ha
D	1100 kg/Ha
E	None of the above
Correct Answer	B
Marks	1

Question Description	What is the use of Tris EDTA buffer in DNA quantification?
A	Disrupt cell membrane
B	Dissociate histones from DNA
C	Precipitate DNA
D	Solubilise DNA
E	None of the above
Correct Answer	D
Marks	1

Question Description	A wasp beetle has the same body markings as a wasp. This helps the wasp beetle because predators think it's a wasp. This adaptation is called ...?
A	Foraging
B	Survival instinct
C	Camouflage
D	Mimicry
E	None of the above
Correct Answer	D
Marks	1

Question Description	<i>Heterocephalus glaber</i> is the scientific name of the
A	Asian Elephants
B	Field Rats
C	African Lions
D	Naked Mole Rats
E	None of the above
Correct Answer	D
Marks	1

Question Description	The type of ribosomes that are present in Archaea are
A	70S
B	16S
C	18S
D	5S
E	None of the above
Correct Answer	A
Marks	1

Question Description	The initiation of FASTA format has ____ symbol
A	>
B	<
C	/
D	*
E	None of the above
Correct Answer	A
Marks	1

Question Description	The purpose of Pepinfo is:
A	Create global alignment of sequences
B	Create plots to display different amino acid properties
C	Calculate properties of protein sequences
D	Calculate the local alignment of two sequences
E	None of the above
Correct Answer	B
Marks	1

Question Description	The mammal which has a very termite like social system is the
A	Asian Elephants
B	Field Rats
C	African Lions
D	Naked Mole Rats
E	None of the above
Correct Answer	D
Marks	1

Question Description	The length of one turn of DNA is
A	3.4 Å
B	34 Å
C	3.04 Å
D	20 Å
E	None of the above
Correct Answer	A
Marks	1

Question Description	Many integrins recognize
A	The RWD motif
B	The RGN motif
C	The AGD motif
D	The RGD motif
E	None of the above
Correct Answer	D
Marks	1

Question Description	In an inverted microscope, the source for transmitted light and the condenser are placed on the top of the stage, pointing down toward the stage. The objectives are located below the stage pointing up. The advantage of this kind of setup is that
A	The distance between objective and cells are increased
B	The cells are observed from the top of the cell culture vessel
C	The cells are observed through the bottom of the cell culture vessel
D	It has no advantage
E	None of the above
Correct Answer	C
Marks	1

Question Description	Alignment method suitable for aligning closely related sequence is:
A	global alignment
B	multiple sequence alignment
C	pairwise alignment
D	local alignment
E	None of the above
Correct Answer	A
Marks	1

Question Description	The main cellular components of BBB are
A	Endothelial cells, pericytes and astrocytes
B	Endometrial cells
C	Smooth muscle cells
D	Satellite cells
E	None of the above
Correct Answer	A
Marks	1

Question Description	Which of the following statement is true of DNA damage?
A	All DNA damage results in diseases such as cancer
B	Most DNA damage is repaired by the cell
C	All DNA damage is caused by physical, chemical or biological agents
D	Most DNA damage is advantageous to the cell
E	None of the above
Correct Answer	B
Marks	1

Question Description	Absolute alcohol is used during extraction of DNA because
A	It increases the dielectric constant
B	It decreases the dielectric constant
C	It increases osmotic shock
D	It decreases osmotic shock
E	None of the above
Correct Answer	B
Marks	1

Question Description	If you add 2000kg of CaCO₃ to a 1 Ha pond which is 1m deep and the alkalinity of the water rises from 5 to 10mg/L, how much lime was required to satisfy the mud demand?
A	1940 kg in mud
B	1930 kg in mud
C	1960 kg in mud
D	1950 kg in mud
E	None of the above
Correct Answer	D
Marks	1

Question Description	----- received the Nobel Prize in 1968 for deciphering the genetic code that translates DNA sequences into the protein molecules that carry out the functions of living cells.
A	James Watson
B	Marie Curie
C	Uttam Raj Bhandary
D	Har Gobind Khorana
E	None of the above
Correct Answer	D
Marks	1

Question Description	The whole organisms that are representative of their environment and whose population changes are used to estimate the effects of pollutants are called as
A	Population
B	Species
C	Bioindicators
D	Bacteria
E	None of the above
Correct Answer	C
Marks	1

Question Description	Akilldeer plover trails its wing and hobbles away from a predator approaching its nest. Once the bird has been followed far enough, it flies off. This is known as the
A	Broken wing trick
B	Hide and seek trick
C	Mimicry
D	Vanishing trick
E	None of the above
Correct Answer	A
Marks	1

Question Description	How many 20-cm Atlantic salmon smolts could be reared in a 1700L/min water supply at sea level at 11°C? Assume one water use.
A	7633 kg
B	633 kg
C	6733 kg
D	733 kg
E	None of the above
Correct Answer	A
Marks	1

Question Description	BrdU (Bromodeoxyuridine / 5-bromo-2'-deoxyuridine) assay is used to identify proliferating cells . It is an analog of?
A	Uracil
B	Thymidine
C	Adenine
D	Guanine
E	None of the above
Correct Answer	B
Marks	1

Question Description	Uterine glands are present in:
A	Uterus
B	Uterine stroma
C	Lumen
D	Fallopian tubes
E	None of the above
Correct Answer	B
Marks	1

Question Description	Lions often hide in the tall grass while stalking their prey. This is an example of how _____ helps them to survive
A	Foraging
B	Survival instinct
C	Camouflage
D	Mimicry
E	None of the above
Correct Answer	C
Marks	1

Question Description	The hydrophathy index of an amino acid represents:
A	Hydrophobic properties
B	Hydrophilic properties
C	Hydrophobic and Hydrophilic properties
D	All of the above
E	None of the above
Correct Answer	C
Marks	1

Question Description	How many 15-cm catfish should be stocked in a cylindrical cage 1.0 m in diameter and 1.2 m deep if their density is to be 200kg/m ³ when they reach a size of 35 cm?
A	515
B	155
C	551
D	150
E	None of the above
Correct Answer	C
Marks	1

Question Description	The dye ----- helps quantify DNA on exposure to UV light
A	Coomassie Blue
B	Phenolphthalein
C	Ethidium Bromide
D	Bromide
E	None of the above
Correct Answer	C
Marks	1

Question Description	Among the following which one is not the approach to the local alignment?
A	Needleman-Wunsch algorithm
B	Smith-Waterman algorithm
C	K-tuple method
D	Words method
E	None of the above
Correct Answer	A
Marks	1

Question Description	The function of the hypothalamus is related to:
A	Circadian rhythm
B	Memory
C	Motor area
D	Luteinizing Hormone
E	None of the above
Correct Answer	A
Marks	1

Question Description	DamodarDharmanandaKosambi was a Goan polymath who contributed to
A	genetics by cracking the genetic code
B	cell biology by finding the functions of the cell membrane
C	genetics by introducing a map function
D	cell biology by deciphering the ribosome structure
E	None of the above
Correct Answer	C
Marks	1

Question Description	Calculate the carrying capacity of trout fed a 2600C/kg diet and a 3300C/kg diet in kg/L/min.
A	2.7 and 7.5
B	5.7 and 7.2
C	7.2 and 5.7
D	5.8 and 7.3
E	None of the above
Correct Answer	B
Marks	1

Question Description	Choose the correct symbol for Alanine:
A	B
B	A
C	C
D	D
E	None of the above
Correct Answer	B
Marks	1

Question Description	Integrins are
A	Cell adhesion molecules
B	Carbohydrates
C	Vitamins
D	Fats
E	None of the above
Correct Answer	A
Marks	1

Question Description	Mangroves protect against all of these except
A	Tsunamis
B	Earthquakes
C	Water pollution
D	Floods
E	None of the above
Correct Answer	B
Marks	1

Question Description	The purpose of Pepstats is:
A	Create global alignment of sequences
B	Translate nucleic acid sequences
C	Calculate properties of protein sequences
D	Calculate the local alignment of two sequences
E	None of the above
Correct Answer	C
Marks	1

Question Description	Which of the following is in correct order regarding DNA extraction?
A	Cell lysis- <i>protease treatment</i> -precipitation
B	Cell lysis-precipitation- <i>protease treatment</i>
C	Cell lysis-DNAse treatment- <i>protease treatment</i> -precipitation
D	Cell lysis- <i>protease treatment</i> -precipitation-DNAse treatment
E	None of the above
Correct Answer	A
Marks	1

Question Description	Suppose a water sample has an alkalinity of 100mg/L CaCO₃ and a CO₂ concentration of 10mg/L. If half of the CO₂ is removed by photosynthesis, what will be the new pH? If three quarters of CO₂ is removed, what will be the new pH?
A	7.0 and 7.8
B	6.9 and 8.0
C	7.1 and 7.9
D	7.5 and 7.8
E	None of the above
Correct Answer	D
Marks	1

Question Description	Q50 The enrichment of natural waters with organic and inorganic material especially phosphate and nitrogen which leads to excessive growth of photosynthetic microorganisms is called as
A	Algal blooms
B	Eutrophication
C	Nitrification
D	Phosphate enrichment
E	None of the above
Correct Answer	B
Marks	1

Question Description	The diameter of the DNA helix is
A	15 Å
B	20 Å
C	25 Å
D	34 Å
E	None of the above
Correct Answer	B
Marks	1

Question Description	Pineapple juice is used in DNA extraction experiment because it helps to
A	Remove histone proteins
B	Remove hydrogen bonds
C	Makes the DNA strand stronger
D	Separates the two strands
E	None of the above
Correct Answer	A
Marks	1

Question Description	CKDu is a kidney disease found in the Canacona taluka of Goa, is caused because of
A	Water pollutants
B	Diabetes
C	High Blood Pressure
D	High Cholesterol
E	None of the above
Correct Answer	A
Marks	1

Question Description	Choose the correct expansion for EMBOSS:
A	European Microbiology Biology Open Software Suite
B	European Molecular Biology Open Software Suite
C	European Molecular Biology Open Software System
D	European Microbiology Biology Open Software System
E	None of the above
Correct Answer	B
Marks	1

Question Description	The purpose of Transeq is:
A	Create global alignment of sequences
B	Create plots to display different amino acid properties
C	Calculate properties of protein sequences
D	Translate nucleic acid sequences
E	None of the above
Correct Answer	D
Marks	1

Question Description	If the lime requirement for your pond is 2116 kg of CaCO₃, how much quicklime (CaO) would you use? How much Dolomite? (Answer in kg/Ha)
A	1182 and 1941
B	1941 and 1182
C	1761 and 1942
D	1982 and 1761
E	None of the above
Correct Answer	A
Marks	1

Question Description	The function of the hippocampus is related to :
A	Circadian rhythm
B	Memory
C	Motor area
D	LH hormone
E	None of the above
Correct Answer	B
Marks	1

Question Description	ChIP arrays are used to identify
A	Protein binding sites across the whole genome
B	Protein protein interactions
C	DNA RNA interactions
D	Antibody binding sites
E	None of the above
Correct Answer	A
Marks	1

Comprehension

Read the Passage Below and answer the questions

Since the end of the last World War, the Emperor has several times rejected the suggestion that a new palace should be built for him or that his existing quarters should be suitable reconstructed. The Emperor refused to live in a luxurious palace, because millions of his people were rendered homeless during the war, their standard of living had fallen and they were subject to various kinds of hardship. The Emperor and the Empress have, therefore, continued to live in the bomb-shelter. This is hardly the place the Emperor would have chosen to live in, as the floor of the bomb-shelter is wet for most of the time. In the last few years, the economic condition of Japan has improved. The Emperor has, therefore, accepted the advice of his ministers that a palace should be built for him.

Question Description

According to the passage, the Emperor refused to live in a palace because

A

he was the Emperor

B

his country suffered a defeat in the war

C	his people were rendered homeless by war
D	he did not wish to live better when his people were homeless and suffering hardships
E	None of the above
Correct Answer	D
Marks	1

Comprehension	<p>Read the Passage Below and answer the questions</p> <p>Since the end of the last World War, the Emperor has several times rejected the suggestion that a new palace should be built for him or that his existing quarters should be suitable reconstructed. The Emperor refused to live in a luxurious palace, because millions of his people were rendered homeless during the war, their standard of living had fallen and they were subject to various kinds of hardship. The Emperor and the Empress have, therefore, continued to live in the bomb-shelter. This is hardly the place the Emperor would have chosen to live in, as the floor of the bomb-shelter is wet for most of the time. In the last few years, the economic condition of Japan has improved. The Emperor has, therefore, accepted the advice of his ministers that a palace should be built for him.</p>
Question Description	The residence of the Emperor is peethily described in the passage as
A	a luxurious palace
B	hardly the place Emperor would have chosen to live in

C	wet for most of the time
D	a bomb-shelter
E	None of the above
Correct Answer	B
Marks	1

Comprehension	<p>Read the Passage Below and answer the questions</p> <p>Since the end of the last World War, the Emperor has several times rejected the suggestion that a new palace should be built for him or that his existing quarters should be suitable reconstructed. The Emperor refused to live in a luxurious palace, because millions of his people were rendered homeless during the war, their standard of living had fallen and they were subject to various kinds of hardship. The Emperor and the Empress have, therefore, continued to live in the bomb-shelter. This is hardly the place the Emperor would have chosen to live in, as the floor of the bomb-shelter is wet for most of the time. In the last few years, the economic condition of Japan has improved. The Emperor has, therefore, accepted the advice of his ministers that a palace should be built for him.</p>
Question Description	Find a word or phrase from the passage which means “dismiss as unacceptable, inadequate or faulty”
A	refused
B	rejected
C	accepted the advice
D	chosen to live
E	None of the above
Correct Answer	B
Marks	1

Comprehension	<p>Read the Passage Below and answer the questions</p> <p>Since the end of the last World War, the Emperor has several times rejected the suggestion that a new palace should be built for him or that his existing quarters should be suitable reconstructed. The Emperor refused to live in a luxurious palace, because millions of his people were rendered homeless during the war, their standard of living had fallen and they were subject to various kinds of hardship. The Emperor and the Empress have, therefore, continued to live in the bomb-shelter. This is hardly the place the Emperor would have chosen to live in, as the floor of the bomb-shelter is wet for most of the time. In the last few years, the economic condition of Japan has improved. The Emperor has, therefore, accepted the advice of his ministers that a palace should be built for him.</p>
Question Description	Select the option that is closest in meaning to the statement : “The Emperor refused to live in a luxurious palace”
A	The Emperor denied living in a luxurious palace”
B	The Emperor rejected staying in a luxurious palace”
C	The Emperor deprived himself from living in a luxurious palace”
D	The Emperor indicated that he was not willing to live in a luxurious palace”
E	None of the above
Correct Answer	D
Marks	1

Comprehension	<p>Read the Passage Below and answer the questions</p> <p>Since the end of the last World War, the Emperor has several times rejected the suggestion that a new palace should be built for him or that his existing quarters should be suitable reconstructed. The Emperor refused to live in a luxurious palace, because millions of his people were rendered homeless during the war, their standard of living had fallen and they were subject to various kinds of hardship. The Emperor and the Empress have, therefore, continued to live in the bomb-shelter. This is hardly the place the Emperor would have chosen to live in, as the floor of the bomb-shelter is wet for most of the time. In the last few years, the economic condition of Japan has improved. The Emperor has, therefore, accepted the advice of his ministers that a palace should be built for him.</p>
Question Description	The bomb-shelter can be aptly described as the
A	palace of the Emperor at present
B	current residence of the Emperor
C	present royal palace
D	current location of the Emperor
E	None of the above
Correct Answer	B
Marks	1

Question Description	Which city has become the new capital of Kazakhstan?
A	Hungary
B	Kiev
C	Nur Sultan
D	Astana
E	None of the above
Correct Answer	D
Marks	1

Question Description	Who was named the Mumbai Indians' first head coach for the IPL 2023 season?
A	Mark Boucher
B	Virender Sehwag
C	Ajit Agarkar
D	Sunil Gavaskar
E	None of the above
Correct Answer	A
Marks	1

Question Description	World Ozone Day is being celebrated on which date?
A	September 13
B	September 17
C	September 16
D	September 11
E	None of the above
Correct Answer	C
Marks	1

Question Description	World's largest museum of Harappan culture is going to be set up in which Indian state?
A	Gujarat
B	Rajasthan
C	Uttar Pradesh
D	Haryana
E	None of the above
Correct Answer	D
Marks	1

Question Description	INS Vikrant, India's first home-built aircraft carrier, has formally commissioned at which place?
A	Naval Dockyard, Vishakapatnam
B	Goa Shipyard Limited
C	Bombay Dockyard
D	Cochin Shipyard Limited
E	None of the above
Correct Answer	D
Marks	1

Question Description	India's first Lithium Cell Manufacturing plant is launched in which state?
A	Arunachal Pradesh
B	Madhya Pradesh
C	Jharkhand
D	Andhra Pradesh
E	None of the above
Correct Answer	D
Marks	1

Question Description	India's first Forest University to be established in which of the following states?
A	Gujarat
B	Rajasthan
C	Telangana
D	Uttar Pradesh
E	None of the above
Correct Answer	C
Marks	1

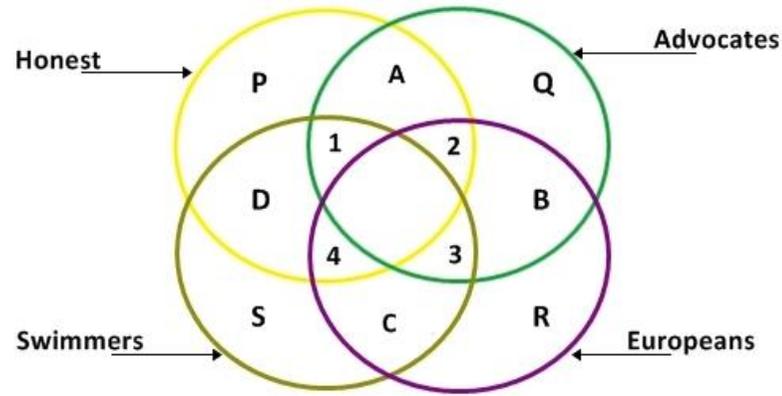
Question Description	India's first and one of the world's largest carbon fibre plants, Reliance Industries is being set up in which state?
A	Rajasthan
B	Gujarat
C	Maharashtra
D	Uttar Pradesh
E	None of the above
Correct Answer	B
Marks	1

Question Description	World Bamboo Day is being observed on which date?
A	September 18
B	September 17
C	September 19
D	September 20
E	None of the above
Correct Answer	A
Marks	1

Question Description	Who are the Star Indian Wrestlers chosen for the World Senior Championships in 2022?
A	Yogeshwar Dutt and VineshPhogat
B	Deepak Punia and Ravi Kumar Dahiya
C	Bajrang Punia and VineshPhogat
D	Ravi Kumar Dahiya and Sakshi Malik
E	None of the above
Correct Answer	C
Marks	1

Question Description

5. What does the area marked 1 in the figure given below represent?



A

All honest European swimmers

B

All honest advocates who are swimmers

C

All no-European advocates who are honest swimmers

D

All non-Europeans who are honest swimmers

E

None of the above

Correct Answer

C

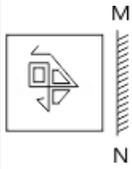
Marks

1

Question Description	<p>Read the given information carefully and answer the questions given beside:</p> <p>A Car moves 8m from Point A in the north direction to reach Point B. Then it turns and moves for 10m in north-west direction. Then it turns and moves 8m in south direction. Then it turns right and moves for 3m to reach point C, which is in west direction with respect to Point B. Then finally, it turns and moves for 10m in south-west direction to reach Point D, which is west direction with respect to Point A.</p> <p>What is the shortest distance between Point A and Point D?</p>
A	12m
B	15m
C	17m
D	20m
E	None of the above
Correct Answer	B
Marks	1

Question Description

Find correct mirror image



A



B



C



D



E

None of the above

Correct Answer

C

Marks

1

Question Description	A man buys a watch for Rs. 1950 in cash and sells it for Rs. 2200 at a credit of 1 year. If the rate of interest is 10% per annum, the man:
A	gains Rs. 55
B	gains Rs. 50
C	loses Rs. 30
D	gains Rs. 30
E	None of the above
Correct Answer	B
Marks	1

Question Description	At 3:40, the hour hand and the minute hand of a clock form an angle of:
A	120°
B	125°
C	130°
D	135°
E	None of the above
Correct Answer	C
Marks	1

Question Description	The angle of elevation of a ladder leaning against a wall is 60° and the foot of the ladder is 4.6 m away from the wall. The length of the ladder is:
A	2.3 m
B	4.6 m
C	7.8 m
D	9.2 m
E	None of the above
Correct Answer	D
Marks	1

Question Description	Statements: Prime age school-going children in urban India have now become avid as well as more regular viewers of television, even in households without a TV. As a result there has been an alarming decline in the extent of readership of newspapers. Conclusions: I. Method of increasing the readership of newspapers should be devised. II. A team of experts should be sent to other countries to study the impact of TV. on the readership of newspapers.
A	Only conclusion I follows
B	Only conclusion II follows
C	Either I or II follows
D	Neither I nor II follows
E	None of the above
Correct Answer	D
Marks	1

Question Description	A tank is filled in 5 hours by three pipes A, B and C. The pipe C is twice as fast as B and B is twice as fast as A. How much time will pipe A alone take to fill the tank?
A	20 hours
B	25 hours
C	35 hours
D	Cannot be determined
E	None of the above
Correct Answer	C
Marks	1

Question Description	On 8th Dec, 2007 Saturday falls. What day of the week was it on 8th Dec, 2006?
A	Sunday
B	Thursday
C	Tuesday
D	Friday
E	None of the above
Correct Answer	D
Marks	1

Question Description	<p>Study the following information carefully and answer the questions given beside.</p> <p>Micky is brother in law of Akku, who has two daughters but no son. Rinku is cousin of Quki and brother of Riku. Vicky has two daughters and one son. Unni has only one son and one daughter. Micky is the only sibling of Wiku. Tinu and Sanu are daughters of Xoxo. Donu is also the member of this family. Riku is granddaughter of Akku, who is married to Wiku. Unni and Vicky are sons in law of Wiku.</p> <p>How is Wiku related to Donu?</p>
A	Father
B	Mother
C	Grandfather
D	Can't be determined
E	None of the above
Correct Answer	D
Marks	1