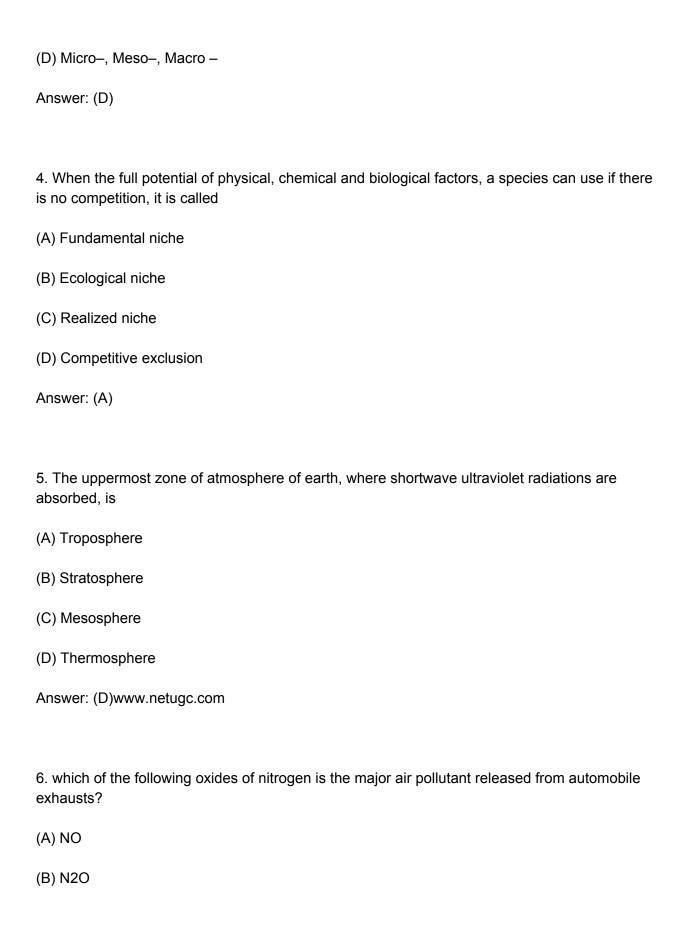
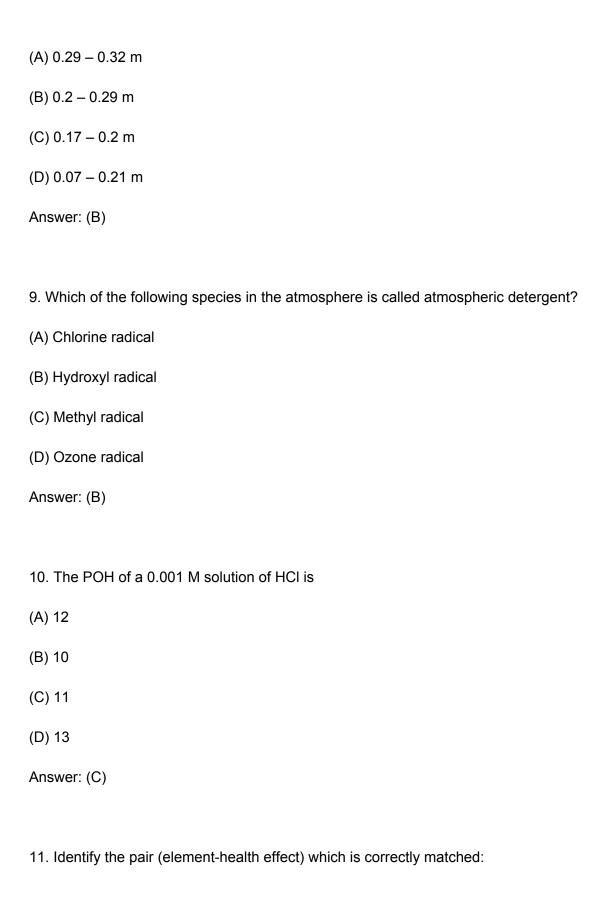
1. Assertion (A): Biosphere constitutes an excellent life-support system which is sustainable and can fulfil all human needs.
Reason (R): The size and productivity of the Biosphere is limited by availability of water, nutrients and environmental conditions.
Identify the correct code:
Codes:
(A) Both (A) and (R) are true and (R) is the correct explanation of (A).
(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
(C) (A) is true but (R) is false.
(D) (A) is false but (R) is true.
Answer: (D)
2. Geostrophic wind occurs when pressure gradient force balances
(A) Coriolis force
(B) Frictional force
(C) Centripetal force
(D) Coriolis and frictional force together
Answer: (A)
3. Scales of Meteorology are in the following order starting from the least
(A) Macro –, Micro –, Meso –
(B) Macro-, Meso-, Micro-
(C) Meso-, Macro-, Micro-



(C) NO2		
(D) N2O3		
Answer: (A)		
7. Match List – I with List – II which contains pollutant gases and their threshold (safe limit) values as per WHO standards:		
List – I	List – II	
(Pollutant gas)	(Thresholds)	
a. CO	i. 2 ppm	
b. SO2	ii. 50 ppm	
c. NO	iii. 0.08 ppm	
d. PAN	iv. 25 ppm	
Identity the correct code:		
Codes:		
a b c d		
(A) ii iii i iv		
(B) iv ii i iii		
(C) ii i iv iii		
(D) iii iv ii i		
Answer: (C)		

8. The band labelled as UV-C which is lethal to micro-organisms is



(A) Lead – Methaemoglobinemia
(B) Arsenic – Kidney damage
(C) Mercury – Nervous disorder
(D) PAN – Hypoxemia
Answer: (D)
12. Which of the following organisms can act as primary consumer, secondary consumer, tertiary consumer or scavenger in different types of food chains?
(A) Raven
(B) Tiger
(C) Snake
(D) Phytoplanktones
Answer: (A)
13. The tendency of biological systems to resist change and to remain in a state of equilibrium is called
(A) Homeostatis
(B) Feedback mechanism
(C) Ecological efficiency
(D) Carrying capacity
Answer: (A)

14. If different categories of threatened species are written in a sequence, what is the correct order?
(A) Extinct-> Vulnerable -> Rare -> Endangered
(B) Vulnerable -> Rare -> Endangered -> Extinct
(C) Vulnerable -> Rare -> Extinct -> Endangered
(D) Rare -> Vulnerable -> Endangered -> Extinct
Answer: (B)www.netugc.com
15. Which of the following is not a type of ex situ conservation method?
(A) Botanical garden
(B) Zoological park
(C) Wildlife sanctuaries
(D) Gene banks
Answer: (C)
16. As a consequence of succession the P/B ratio (Gross production /
Standing crop biomass) is changed. It is
(A) High during developmental stages and low at mature stage.
(B) Low during developmental stages and high at mature stage.
(C) > 1 or < 1 at developmental stages and approximately 1 at mature stage.
(D) Remaining unchanged at all stages.
Answer: (A)

17. Preparation of hazard-zoning map in case of landslide prone regions involves comprehensive investigation of
(A) Details of structural and lithological settings.
(B) Geomorphic features relating to instability of slopes.
(C) Seismicity pattern of the region.
(D) all of the above.
Answer: (D)
18. If ap = specified value of peak acceleration, N = mean rate of occurrence of earthquake per year, tep = time interval of consideration (exposure period) and Fap = probability that an observed acceleration is less than or equal to ap, then the cumulative probability distribution of peak acceleration for epoch – dependent seismic hazard map is given by which formula?
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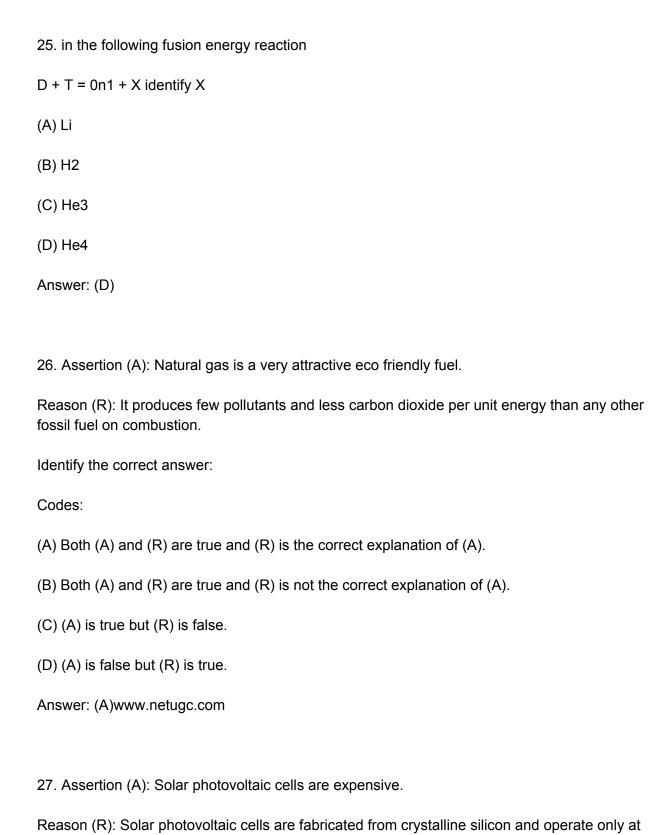
19. Assertion (A): In oceans, Na has the longest residence time, within an order of magnitude of the age of the oceans.

Reason (R): The long residence time of Na reflects a lack of reactivity of sodium in the marine environment by not being readily incorporated in the common sedimentary minerals, nor being removed by biological reactions.

Identify the correct code:

Codes:
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(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
(C) (A) is true, but (R) is false.
(D) (A) is false, but (R) is true.
Answer: (A)
20. According to Goldieh the decreasing order of stability of following minerals of igneous rocks towards weathering is
(A) Muscovite > Quartz > Potash feldspar >Biotite
(B) Biotite> Potash feldspar >Muscovite > Quartz
(C) Quartz > Muscovite > Potash feldspar >Biotite
(D) Potash feldspar > Quartz > Muscovite > Biotite
Answer: (C)
21. In universal polar stereographic coordinate system the eastings and northings are computed using which projection method?
(A) Polar aspect stereographic projection
(B) Non-polar aspect stereo graphic projection
(C) Polar aspect Mercator projection
(D) Non-polar aspect Mercator projection
Answer: (A)

22. Pitchblende is an ore of
(A) Nickel
(B) Chromium
(C) Molybdenum
(D) Uranium
Answer: (D)
23. Copper (Cu) is classified according to its geochemical affinity as
(A) Siderophile element
(B) Chalcophile element
(C) Lithophile element
(D) Atmophile element
Answer: (B)
24. If 'a' is the fractional wind speed decrease at the wind turbine, the maximum https://www.freshersnow.com/previous-year-question-papers/ extraction of power from the wind occurs when 'a' is equal to
(A) 1/2
(B) 1/3
(C) 1
(D) 3/5
Answer: (B)



10-12% efficiency.

Identify the correct answer:
Codes:
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(B) Both (A) and (R) are true and (R) is not the correct explanation of (A).
(C) (A) is true but (R) is false.
(D) (A) is false but (R) is true.
Answer: (A)
28. Human activities add 7-9 gigatons of CO2 per annum into the atmosphere. Major contributor to this CO2 is
(A) Burning of fossil fuels
(B) Clearing of forests for agriculture
(C) Fermentation industries
(D) Cement industries
Answer: (A)
29. According to WHO, maximum permissible level of chlorides in drinking water is
(A) 100 mg/L
(B) 200 mg/L
(C) 600 mg/L
(D) 800 mg/L
Answer: (C)

30. Wilting coefficient of a loam represents
(A) The minimum water content of the soil at which plants can no longer obtain water
(B) Water holding capacity
(C) Capillary water
(D) Field capacity
Answer: (A)