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**S.Y.B.Sc. 2020-21**

**SEM - IV**

**Paper III**

**Question Bank**

**Unit-I**

Sr. No.		
1)	New Zealand is an example of (A) Convergent plate boundary (B) Divergent plate boundary (C) Conservative plate boundary (D) Both convergent and conservative plate boundary	
2)	In which tectonic environment, you can find the surface expression in the form of folding? (A) Extensional (B) Compression (C) Strike slip (D) Extensional and Compression	
3)	Now India is divided into _____ seismic zones. (A) 5 (B) 3 (C) 6 (D) 4	
4)	Which of the following is not depends on shear strength of the material? (A) Cohesion (B) Internal friction (C) Normal stress (D) Mass of the material	
5)	The Elastic Rebound Theory is associated with a. Earthquakes b. Volcanoes c. Continental drift d. Atmospheric pressure	
6)	The place which experiences the seismic event first is called a. Focus b. Eye c. Fault d. Epicenter	

7)	<p>Which of the following waves reach the surface of the Earth first?</p> <p>a. <b>P waves</b>  b. S waves  c. L waves  d. P or S waves</p>	
8)	<p>Who postulated the concept of horizontal displacement of the continents?</p> <p>a. <b>F. B Taylor</b>  b. Alfred Wegener  c. Harry Hess  d. Wilson</p>	
9)	<p>The largest plate identified in the lithosphere is</p> <p>a. <b>Pacific plate</b>  b. Juan De Fuca plate  c. Nazca plate  d. Philippines plate</p>	
10)	<p>The smallest plate in the lithosphere is</p> <p>a. Pacific plate  b. <b>Juan De Fuca plate</b>  c. Nazca plate  d. Philippines plate</p>	
11)	<p>The concept of sea floor spreading was given by</p> <p>a. <b>Hary Hess</b>  b. Alfred Wegener  c. F B Taylor  d. Immanual Kant</p>	
12)	<p>Match the following.</p> <p>1. Convergent ----- A. Pacific Ring of Fire  2. Divergent ----- B. Mid- Atlantic Ridge  3. Hot Spot ----- C. Hawaiian Islands</p> <p>a. <b>1A, 2B, 3C</b>  b. 1B, 2A, 3C  c. 2A, 3B, 3C  d. 1B, 2C, 3A</p>	
13)	<p>Who gave the theory of Nebular Hypothesis?</p> <p>a. Harry Hess  b. <b>Immanuel Kant</b>  c. F B Taylor  d. Kepler</p>	
14)	<p>Who among the following is not identified with the Nebular Hypothesis?</p>	

	<ul style="list-style-type: none"> <li>a. Laplace</li> <li>b. Otto Schmidt</li> <li>c. Carl Weizascar</li> <li>d. <b>Wilson Smith</b></li> </ul>	
15)	<p>Asthenosphere is characterized by</p> <ul style="list-style-type: none"> <li>a. <b>Less rigidity</b></li> <li>b. low temperature</li> <li>c. high pressure</li> <li>d. more rigidity</li> </ul>	
16)	<p>Identify the right order of elements that hold greater percentage in the Earth.</p> <ul style="list-style-type: none"> <li>a. <b>Iron, oxygen, silicon, magnesium</b></li> <li>b. Oxygen, iron, silicon, nickel</li> <li>c. Oxygen, silicon, magnesium, iron</li> <li>d. Iron, oxygen, magnesium, silicon</li> </ul>	
17)	<p>Identify the right order of elements that hold greater percentage in the Earth's crust.</p> <ul style="list-style-type: none"> <li>a. <b>Oxygen, silicon, aluminum, iron</b></li> <li>b. Oxygen, iron, silicon, nickel</li> <li>c. Oxygen, silicon, magnesium, iron</li> <li>d. Iron, oxygen, magnesium, silicon</li> </ul>	
18)	<p>The weight of water vapor per unit weight of air is</p> <ul style="list-style-type: none"> <li>a) Absolute Humidity</li> <li>b) Relative humidity</li> <li>c) <b>Specific Humidity</b></li> <li>d) Relative Humidity and Specific Humidity</li> </ul>	
19)	<p>The periodic phenomenon of alternate rise and fall in sea level is known as</p> <ul style="list-style-type: none"> <li>A) Waves</li> <li>B) Tsunami</li> <li>C) Currents</li> <li>D) <b>Tides</b></li> </ul>	
20)	<p>The position if the sun, the earth and the moon are in straight line is called</p> <ul style="list-style-type: none"> <li>A) Cliff</li> <li>B) Seiche</li> <li>C) Conjunction</li> <li>D) <b>Syzygy</b></li> </ul>	
21)	<p>The origin of Himalayas can best be explained by</p> <ul style="list-style-type: none"> <li>a. Continental Drift Theory</li> <li>b. Ocean Floor Mapping</li> <li>c. Sea Floor Spreading</li> <li>d. <b>Theory of Plate Tectonics</b></li> </ul>	
22)	<p>Which are the important factors responsible for weather formation in any region?</p> <ul style="list-style-type: none"> <li>I. Temperature</li> <li>II. Latitude</li> <li>III. Pressure</li> <li>IV. Rainfall</li> </ul>	

	<p>a. I and II only  <b>b. I and IV only</b>  c. I,II and III only  d. I only</p>	
23)	<p>Which of the following are not called "terrestrial planets"• ?</p> <p>a. Mercury  b. Venus  c. Mars  <b>d. Jupiter</b></p>	
24)	<p>Which of the following planets is nearest to the sun?</p> <p><b>a. Mercury</b>  b. Venus  c. Mars  d. Earth</p>	
25)	<p>Which of the following waves travels slowly?</p> <p>a) P waves  b) S waves  <b>c) Tsunami waves</b>  d) seismic body wave</p>	
26)	<p>What is the correct sequence of arrival of seismic waves</p> <p><b>a.) P waves- S waves .. Love waves - Rayleigh waves</b>  b.) Surface waves ... P waves .... S waves  c.) P waves ... Surface waves ... S waves  d.) S waves ... P waves .... Surface waves</p>	
27)	<p>The place which experiences the seismic event first is called</p> <p>a. Focus  b. Eye  c. Fault  <b>d. Epicentre</b></p>	
28)	<p>Which of the following waves reach the surface of the Earth first?</p> <p><b>a. P waves</b>  b. S waves  c. L waves  d. P or S waves</p>	
29)	<p>Which of the following earthquake waves is first recorded on the Seismograph?</p> <p><b>(a) P-waves</b>  (b) Rayleigh waves  (c) S-waves  (d) Love waves</p>	
30)	<p>The Intensity scale of the earthquake is called?</p> <p><b>(a) Mercalli scale</b></p>	

	(b) Richter scale (c) Number scale (d) Mercalli scale as well as number scale	
31)	The type of plate- boundary interaction along the Himalayas is known as?  (a) Divergent boundary (b) Transform boundary <b>(c)Continent-continent convergence.</b> (d) Ocean-continent convergence	
32)	Seismic waves are waves of energy that: (a) plastically distort the material that they pass through, (b) permanently distort the material that they pass through, (c) break the material that they pass through <b>(d) elastically distort the material that they pass through</b>	
33)	S-waves produce a series of: (a) contractions and expansions that are in the direction of wave propagation, (b) snake-like motions parallel to the Earth's surface, (c) circular motions like an ocean wave <b>(d) shearing motions that are at right angles to the direction of wave propagation</b>	
34)	Rayleigh waves move along the surface of the Earth forming a wave that is much like: (a) a skier moving down a mountain hill, (b) a car traveling through the sand dunes, <b>(c) an ocean wave</b> (d) a whale gliding along the ocean's surface	
35)	A seismograph is a device used to: (a) sound an alarm, (b) prevent earthquakes from occurring, <b>(c) record the vibrations produced during an earthquake</b> (d) calm the seismologist during an earthquake	
<b>UNIT II</b>		
1.	Microprocessor was introduced in the year _____  A. 1945 <b>B. 1971</b> C. 1974 D. 1980	

2.	<p>The number of address lines required to access 64 Kbyte of memory of the microprocessor is _____</p> <p>A. <b>16</b>  B. 32  C. 20  D. 8</p>	
3.	<p>Flip-flop sare used in a microprocessor to indicate_____</p> <p>A. Shift register  B. latch  C. counters  <b>D. flag</b></p>	
4.	<p>The first microprocessor was _____</p> <p>A. 4001  B. 8085  C. 4003  <b>D. 4004</b></p>	
5.	<p>Which of the following microprocessor has an 8bit data bus _____</p> <p>A. 4004  B. 80186  <b>C. 8085</b>  D. 8086</p>	
6.	<p>The number of flags in 8085 are _____</p> <p>A. 4  B. 8  C. 6  <b>D. 5</b></p>	
7.	<p>The 16 bit processor is _____</p>	

	<p>A. 8085  <b>B. 8086</b>  C. 80486  D. Pentium</p>	
8.	<p>The data bus of microprocessor is _____</p> <p>A. unidirectional  <b>B. bi –directional</b>  C. unidirectional as well as bi –directional  D. tridirectional</p>	
9.	<p>Which system communicates with the outside world via the I/O devices interfaced to it:</p> <p>A. Microprocessor  <b>B. Microcomputer</b>  C. Digital computer  D. Microprocessor and microcomputer</p>	
10.	<p>How many generation of microprocessor:</p> <p>A. Four  <b>B. Five</b>  C. Six  D. Three</p>	
11.	<p>Each Machine cycle consists of many clock periods called as</p> <p><b>A. t-states</b>  B. instruction cycle  C. fetch cycle  D. machine cycle</p>	
12.	<p>The length of LXI H, 9000H is</p> <p>A. one-byte</p>	

	<p>B. Two-Byte  <b>C. Three-Byte</b>  D. Four-Byte</p>	
13.		
14.	<p>In 8085, 16-bit address bus, which can address upto?</p> <p>A. 16KB  B. 32KB  <b>C. 64KB</b>  D. 128KB</p>	
15.	<p>Assembly language programs are written using</p> <p>A. Hex code  <b>B. Mnemonics</b>  C. ASCII code  D. ASCII code and Hex code</p>	
16.	<p>How many types of Interfacing?</p> <p><b>A. 2</b>  B. 3  C. 4  D. 5</p>	
17.	<p>Which of the following are known as Higher Address Bus?</p> <p><b>A. A15 - A8</b>  B. AD7-AD0  C. READY  D. WR</p>	
18.	<p>DMA stands for?</p> <p>A. Display Memory Access</p>	

	<p>B. Directly Memory Access  C. Device Memory Access  <b>D. Direct Memory Access</b></p>	
19.	<p>STA 4000 is -----byte instruction</p> <p>A. one  <b>B. three</b>  C. two  D. Four</p>	
20.	<p>RAL is an example of -----addressing mode</p> <p>A. register  B. Direct  <b>C. Implied</b>  D. immediate</p>	
21.	<p>Stack pointer is a ----- register</p> <p><b>A. 16 bit</b>  B. 8 bit  C. 32 bit  D. 4 bit</p>	
22.	<p>In I/O mapped input device is</p> <p>A. latch  <b>B. buffer</b>  C. decoder  D. stack</p>	
23.	<p>In I/O mapped output device is</p> <p>A. buffer  B. encoder  <b>C. latch</b>  D. stack</p>	

24.	<p>If accumulator content is 88H, after execution of CMA accumulator content will be _____</p> <p><b>A. 77H</b>  B. 93H  C. FFH  D. 80H</p>	
25.	<p>LDA is -----Instruction</p> <p>A. arithmetic  B. Logical  C. Branch  <b>D. data transfer</b></p>	
26.	<p>If A=56H, B=82H after execution of ANA B content of A= -----</p> <p><b>A. 02H</b>  B. 56H  C. 00H  D. D8H</p>	
27.	<p>8085 has EPROM of</p> <p>A. 1KB  B. 526Bytes  <b>C. 64KB</b>  D. 128KB</p>	
28.	<p>In 8085, 16-bit address bus, which can address upto?</p> <p>A. 16kb  B. 32kb  <b>C. 64kb</b>  D. 128kb</p>	
29.	<p>There are _____ general purpose registers in 8085 processor</p>	

	<p>A. 5  <b>B. 6</b>  C. 7  D. 8</p>	
30.	<p>It is also a 16-bit register works like stack, which is always incremented/decremented by 2 during push &amp; pop operations</p> <p><b>A. Stack pointer</b>  B. temporary register  C. Flag register  D. Program counter</p>	
31.	<p>What is true about Program counter?</p> <p>A. It is an 8-bit register, which holds the temporary data of arithmetic and logical operations  B. When an instruction is fetched from memory then it is stored in the program counter  C. It provides timing and control signal to the microprocessor  <b>D. It is a 16-bit register used to store the memory address location of the next instruction to be executed</b></p>	
32.	<p>This signal indicates that another master is requesting the use of the address and data buses.</p> <p>A. READY  <b>B. HOLD</b>  C. HLDA  D. INTA</p>	
33.	<p>This signal is used as the system clock for devices connected with the microprocessor</p> <p>A. X1, X2  <b>B. CLK OUT</b>  C. CLK IN  D. IO/M</p>	
34.	<p>The register in the 8085A that is used to keep track of the memory address of</p>	

	<p>the next op-code to be run in the program is the:</p> <p>A. stack pointer  <b>B. program counter</b>  C. instruction pointer  D. accumulator</p>	
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## Unit –III

1.	<p>An ionizing radiation consists of.</p> <p>a) only particles  b) only waves  c) waves and particles both  d) Matter</p> <p><b>Ans: c</b></p>
2.	<p>Gamma radiation consists of</p> <p>a) longitudinal waves  b) electromagnetic waves  c) sound waves  d) Micro Waves</p> <p><b>Ans: b</b></p>
3.	<p>Which of the following is not an ionizing radiation?</p> <p>a) visible light  b) gamma radiation  c) X-rays  d) Alpha Particle</p> <p><b>Ans: a</b></p>
4.	<p>4. Radioactivity was discovered by _____</p> <p>a) Roentgen  b) Becquerel  c) Rutherford  d) Newton</p> <p><b>Ans: b</b></p>
5.	<p>X-rays were discovered by . .</p> <p>a) Newton  c) Rutherford  b) Becquerel  d) Roentgen</p> <p><b>Ans: d</b></p>
6.	<p>Alpha radiation is _</p> <p>a) positively charged  b) negatively charged  c) neutral  d) 1</p> <p><b>Ans: a</b></p>
7.	<p>Beta radiation is _</p>

	<p>a) positively charged  b) negatively charged  C) neutral  d) 1  <b>Ans:b</b></p>
8.	<p>Gamma radiation is  a) positively charged  b) negatively charged  c) neutral  d) 1  <b>Ans: c</b></p>
9.	<p>Which of the following radiation is least penetrating  a) alpha radiation  b) Beta radiation  c) gamma radiation  d) Neutron  <b>Ans: a</b></p>
10.	<p>In beta emission, an electron is ejected from  a) the outer most orbit of an atom  b) the innermost orbit of an atom  c) the nucleus of an atom  d) At the centre  <b>Ans: c</b></p>
11.	<p>A radioactive nucleus  a) always emits an alpha particle and a beta particle simultaneously.  b) never emits an alpha particle and a beta particle simultaneously  c) sometimes emits an alpha and a beta particle simultaneously  d) Partially emits an alpha particle  <b>Ans:b</b></p>
12.	<p>In gamma emission by a nucleus  a) the atomic number and the mass number do not change  b) the mass number changes but not the atomic number.  c) the atomic number changes but not the mass number  d) both changes  <b>Ans:a</b></p>
13.	<p>In alpha particle emission by a nucleus.  a) only the atomic number changes  b) only the mass number changes  c) both, the mass number and the atomic number change  d) none of above  <b>Ans:c</b></p>
14.	<p>In beta particle emission by a nucleus.  a) only the atomic number changes  b) only the mass number changes  c) both, the mass number and the atomic number change  d) none of above  <b>Ans: a</b></p>
15.	<p>Which of the following is not a background radiation?  a) cosmic rays  b) radiation present in our body</p>

	<p>c) Gamma ray d) radiation emitted by nuclear waste from a reactor</p> <p><b>Ans: d</b></p>
16.	<p>Amount of ionization produced by a particle in a medium depends upon</p> <p>a) the nature of the particle only b) the energy of the particle only c) energy of medium d) the nature and energy of the particle</p> <p><b>Ans: d</b></p>
17.	<p>Photons are,</p> <p>a) positively charged b) negatively charged c) neutral d) 1</p> <p><b>Ans: c</b></p>
18.	<p>If <math>n_1</math> and <math>n_2</math> are the number of ion-electron pairs produced per centimeter in air by an alpha particle and a beta particle respectively, then.</p> <p>a) <math>n_1 = n_2</math> b) <math>n_1 &gt; n_2</math> c) <math>n_1 &lt; n_2</math> d) <math>n_1 \neq n_2</math></p> <p><b>Ans: b</b></p>
19.	<p>Scintillations produced in a material are due to the phenomenon of</p> <p>a) Fluorescence b) Phosphorescence c) Thermoluminescence d) ultraviolet</p> <p><b>Ans: a</b></p>
20.	<p>Personal dosimeters are mainly used by people working in</p> <p>a) stations b) Coal mines c) Banks d) Nuclear reactors</p> <p><b>Ans: d</b></p>
21.	<p>Metastable states do not exist in</p> <p>a) fluorescent material b) phosphorescent material c) thermoluminescent material d) Radioactive material</p> <p><b>Ans: a</b></p>
22.	<p>The instrument used to measure the degree of blackening of silver deposit on a photographic film is called_</p> <p>a) densitometer b) dosimeter c) lactometer d) Calorimeter</p> <p><b>Ans: a</b></p>

23.	<p>A dosimeter measures the</p> <p>b) equivalent dose</p> <p>a) effective dose</p> <p>c) absorbed dose</p> <p>d) Reflective doses</p> <p><b>Ans: c</b></p>
24.	<p>When radiation beam emitted by a radiation producing device moves outward, it</p> <p>a) diverges</p> <p>b) converges</p> <p>c) neither converges nor diverges</p> <p>d) both</p> <p><b>Ans: a</b></p>
25.	<p>Which of the following is not a radiation beam parameter?</p> <p>a) spot size</p> <p>b) beam divergence</p> <p>c) fluorescence</p> <p>d) spot Length</p> <p><b>Ans: c</b></p>
26.	<p>Which of the following is used for radiation protection purposes?</p> <p>a) Electrometers</p> <p>b) Dosimeters</p> <p>c) Glucometer</p> <p>d) Hectometer</p> <p><b>Ans: b</b></p>
27.	<p>The SI unit of absorbed dose of radiation is</p> <p>a) joule</p> <p>b) Dyne</p> <p>c) erg</p> <p>d) gray</p> <p><b>Ans: d</b></p>
28.	<p>Which of the following is radioactive?</p> <p>a) C-12</p> <p>b) N-14</p> <p>c) C-14</p> <p>d) C-13</p> <p><b>Ans: c</b></p>
29.	<p>Our body contains radioactive</p> <p>a) uranium</p> <p>b) carbon</p> <p>c) thorium</p> <p>d) Neptunium</p> <p><b>Ans: b</b></p>
30.	<p>Which isotope of potassium is radioactive?</p> <p>a) K-38</p> <p>b) K40</p> <p>c) K-39</p> <p>d) P-20</p> <p><b>Ans: b</b></p>