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**B.M.S. College of Engineering, Bengaluru-560019**

**Autonomous Institute Affiliated to VTU**

## September / October 2023 Semester End Main Examinations

**Programme: B.E.**

### Branch: Common to all Branches

**Course Code: 22MA1AESFH / 22MA2AESFH**

**Course: Scientific Foundation for Health**

**Semester: I / II**

**Duration: 1 hr.**

**Max Marks: 50**

**Instructions:** 1. Part C answer any three.

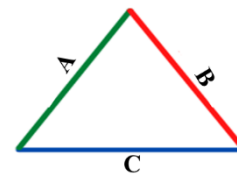
## PART-A

## Multiple choice questions

**25 X 1= 25 Marks**

### 1. Identify A, B, C of balanced health triangle

- A- Psychology, B- Mental, C- Social determinants
- A- Physical, B- Behaviour, C- Social status.
- A- Anxiety, B- Exercise, C- Emotion
- A- Physical, B- Mental, C- Social



2. ....is the characteristic patterns of thoughts, feelings, and behaviors that make a person unique.

- a. Personality                      b. Society                      c. Attitude                      d. Psychology

### 3. Four stages of developing/changing a habit are

- Preparation, action, maintenance, contemplation
- Contemplation, action, Maintenance, execution
- Contemplation, Preparation, Action, Maintenance
- Preparation, contemplation, action, maintenance

#### 4. Anxiety disorders include

- a. Global Developmental Delay  
b. Communication Disorders  
c. Panic disorder  
d. Insomnia Disorder

## 5. Resilient personality people are

- a. people who experience anxiety, depression  
b. self-centered people  
c. adapting well to adversity, trauma, tragedy  
d. people who are social and outgoing

## 6. Cardiovascular endurance is

- Body's ability to efficiently and effectively intake oxygen and deliver it to body's tissues.
- Body's ability to efficiently and effectively be flexible.
- Body's ability to efficiently and effectively lift weights.
- All of these

**7. Dual-energy X-ray absorptiometry scans are done to measure**

- a. Muscular strength
- b. Body composition
- c. Muscular endurance
- d. Cardiovascular endurance

**8.....is a condition in which a person regurgitates food they have previously chewed and swallowed, re-chews it, and then either re-swallows it or spits it out.**

- a. Binge eating disorder
- b. Bulimia nervosa
- c. Anorexia nervosa
- d. Rumination disorder

**9. Regulation of blood sugar levels, bowel function and bowel health are the functions of**

- a. Carbohydrates
- b. Vitamins & minerals
- c. Proteins
- d. Fibre

**10. Baked and fried foods, and industrially produced pre-packaged snacks and foods contain**

- a. trans-fats
- b. saturated fats
- c. poly unsaturated fats
- d. unsaturated fats

**11. High friendship health include**

- a. Envy
- b. Fake
- c. Trust
- d. Disdain

**12. Akil is 1.66 mts height with 82kgs. Based on the calculated BMI, assign him to right category.**

- a. Overweight
- b. Obese
- c. Underweight
- d. None of the above

**13. Daksh has been vaccinated against the major childhood disorders of measles, influenza, hepatitis, diphtheria, and tetanus. This is a major example of**

- a. Social determinant
- b. Social Engineering
- c. Social process
- d. None of these

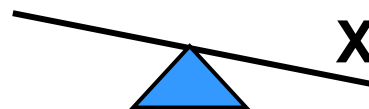
**14. Hema was detected with hemoglobin content of 8.5 in the blood. To overcome this situation he need to be provided with what medication?**

- a. Vitamin K, Calcium and Iron.
- b. Folic acid, Calcium and Vitamin C-rich foods.
- c. Vitamin B6, B12 rich food
- d. Iron capsules, folic acid, and Vitamin B12-rich foods

**15. Identify 'X' of the Energy balance from the figure?**

- a. Energy out: diet
- b. Energy out: sleep
- c. Energy out: activity
- d. Energy out: breathing

Energy in:  
food and  
drinks



**16. Tina is showing unpredictable mood, outbursts of emotions, quarrelsome behaviour and conflict. This indicates she is suffering from**

- a. addictive disorders
- b. schizophrenia
- c. borderline personality disorder
- d. mood disorders

**17. The part of brain affected when a person consumes alcohol leading to loss of balance**

- a. cerebral cortex      b. thalamus      c. cerebellum      d. medulla

**18. Which of them is hallucinogenic drug?**

- a. Morphine      b. Cocaine      c. LSD      d. Heroine

**19. Parkinsonism is due to which defective transmitter in brain?**

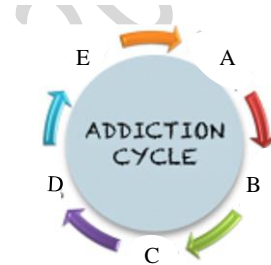
- a. Noradrenaline      b. eucalpia      c. dopamine      d. serotonin

**20. High sodium intake and insufficient potassium intake**

- a. contribute to low blood pressure, which in turn increases the risk of heart disease and stroke.  
b. contribute to high blood pressure, which in turn decreases the risk of heart disease and stroke.  
c. contribute to high blood pressure, which in turn increases the risk of heart disease and stroke  
d. All of these

**21. Identify A, B, C, D, E of the addiction cycle**

- a. A-Emotional trigger, B- craving, C-ritual, D-using, E- guilt  
b. A-Physical trigger, B- craving, C-use, D-overuse, E- guilt  
c. A-Psychological, B- addiction, C-use, D-misuse, E- guilt  
d. A-addiction, B- using, C-ritual, D- craving, E- guilt



**22. Which is the Vector for Malaria**

- a. Drosophila      b. House fly  
c. Culex mosquito      d. Female Anopheles mosquito

**23. Virulent factors of any pathogen are:**

- a. Pilli & Adhesins      b. Toxins & Invasins  
c. Enzymes & antibiotics      d. All of these

**24. The infection transmitted through ..... contact may cause STD.**

- a. Direct      b. non-direct  
c. Animals      d. None

**25. This is not a communicable disease**

- a. Chickenpox      b. AIDS      c. Typhoid      d. Diabetes

## **PART- B**

**Match the following**

**5X 2= 10 Marks**

**1. Match the following with sources of transmission**

- |                  |                        |
|------------------|------------------------|
| i. Cholera       | A. Animal bite         |
| ii. Tuberculosis | B. Soil borne disease  |
| iii. Tetanus     | C. Water borne disease |
| iv. Rabies       | D. Airborne disease    |

## 2. Match the stages of addiction

- |              |                    |
|--------------|--------------------|
| i. Stage 1   | A. High risk use   |
| ii. Stage 2  | B. Experimentation |
| iii. Stage 3 | C. Addiction       |
| iv. Stage 4  | D. Regular Use     |

## 3. Match the Personality

- |                    |                   |
|--------------------|-------------------|
| i. Optimistic      | A. Adaptive       |
| ii. Neurotic       | B. High-achieving |
| iii. Conscientious | C. Positiveness   |
| iv. Resilient      | D. Self-doubt     |

## 4. Match the composition in balanced diet

- |                    |          |
|--------------------|----------|
| i. Carbohydrates   | A. 15%   |
| ii. Proteins       | B. 60%   |
| iii. Fat           | C. vital |
| iv. Micronutrients | D. 25%   |

## 5. Match the eating disorders

- |                         |                              |
|-------------------------|------------------------------|
| i. Anorexia nervosa     | A. eating non-food substance |
| ii. Bulimia nervosa     | B. Regurgitate               |
| iii. Pica               | C. Restrict calories         |
| iv. Rumination disorder | D. Purging                   |

### Part-C

Answer in detail any 3 questions

3X5 =15 Marks

1. Bablu has BMI above 40 indicating obesity. Doctor advised him to reduce weight. Suggest him on balanced diet, eating disorders and fitness components of health.
2. Arun has poor communication skills. How can he improve his communication skills and detail on impact of communication on friendship/relationship.
3. Jazz fell into alcohol/drug addiction. Detail on how addictions develop, types and deaddiction.
4. What are modes of infections and how can it be prevented? How can chronic illness affect quality of life?
5. Define health. Write a note on factors influencing health and behavior.

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