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

Autonomous Institute Affiliated to VTU

May 2023 Semester End Main Examinations

Programme: B.E.

Branch: Common to all Branches

Course Code: 21BT1AESFH / 21BT2AESFH

Course: Scientific Foundations of Health

Semester: I / II

Duration: 2 hrs.

Max Marks: 100

Date: 24.05.2023

- Instructions:** 1. Answer all the questions from Part A & B
2. Answer any four questions from Part C.

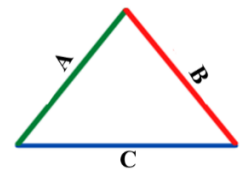
PART-A

Multiple Choice questions

40 X 1 =40 marks

1. The figure below indicates.....and identify A, B, C

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



2. Protein in the diet is mainly used for

- Energy storage and hormone
- Tissue growth and maintenance
- Good bowel function
- Metabolism regulation

3. Arjun, a 4-year-old boy has not developed speech and other motor skills. Identify the disorder along with its subtype

- Generalized anxiety disorder in anxiety disorders
- Conversion disorder in somatic symptom disorders
- Global development delay in neurodevelopmental disorder
- Dysthymia in depressive disorders

4. Cardiovascular endurance is

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

5. The term used for regular and excessive use of a substance in spite of dangers is

- Abuse
- Addiction
- Dependence
- Tolerance

- 6. The part of brain affected when a person consumes alcohol leading to loss of balance is**
- Cerebral cortex
 - Thalamus
 - Cerebellum
 - Medulla
- 7. Which personality group experience anxiety, depression, shy, and self-doubt**
- Neurotic
 - Optimistic
 - Narcissist
 - Resilient
- 8. Diana travels with Florence daily in the same metro for job. Diana recognizes Florence and greets her, but don't really know him fully. What type of friendship is this?**
- Close friendship
 - Best friendship
 - Acquaintance friendship.
 - Lifelong friendship
- 9. Mahesh is open to new ideas, thinks critically and finds ways to be creative, he has good**
- Spiritual wellness
 - Intellectual wellness
 - Physical wellness
 - None
- 10. Four stages of developing/changing a habit are**
- Preparation, action, maintenance, contemplation
 - Contemplation, action, maintenance, execution
 - Contemplation, preparation, action, maintenance
 - Preparation, contemplation, action, maintenance
- 11. Health beliefs are..... determined, and all come together to form larger health belief systems.**
- culturally
 - economically
 - socially
 - emotionally
- 12. Calculate the body weight of Krishna in Kilograms by considering his height being 1.72 mts and BMI 22.8.**
- 67.5 kgs
 - 62.5 kgs
 - 60.9 kgs
 - 71 kgs
- 13. Rahul's extensively alcohol addiction led to the damage to his neurons and glia. Identify the disease he is suffering from**
- Korsakoff's syndrome
 - Parkinson's disease
 - Multiple sclerosis
 - Spinocerebellar ataxia
- 14. Health disparity is a particular type of health difference that is closely linked with**
- mental and behavior disadvantage
 - language and barrier disadvantage
 - social, economic, and environmental disadvantage
 - physical disability disadvantage
- 15. The best example for Social Engineering of children health is**
- Health information
 - Vaccination
 - Health Insurance
 - Healthy lifestyle

16. Mindfulness for spiritual and intellectual health

- a. includes cognitive improvements.
- b. includes reduced memory
- c. reduced emotional regulation
- d. reduced concentration

17. Skinfold thickness tests is done for detection of

- a. Muscular strength
- b. Muscular endurance
- c. Cardiovascular endurance
- d. Obesity

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

- a. A-Emotional trigger, B- carving, C-ritual, D-using, E- guilt
- b. A-Physical trigger, B- carving, 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- carving, E- guilt



19. The need for and importance of health education is

- a. to conduct public awareness
- b. to eradicate health related superstition
- c. to develop positive attitude towards health
- d. All of the above

20. Potassium can mitigate the..... effects of elevated sodium consumption on blood pressure

- a. positive
- b. Negative
- c. both positive and negative
- d. Neither positive nor negative

21. WHO recommends eating at least of fruit and vegetables per day

- a. 200g
- b. 300g
- c. 400g
- d. 500g

22. What are the sources of infection?

- a. Food
- b. Water
- c. Air
- d. All of the above

23. People with..... do not restrict calories or use purging behaviors, such as vomiting or excessive exercise

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

24. Identify the skill which is most vital part of communication, that is active, hard skill physical and mental process.

- a. Hearing skill
- b. Speaking skill
- c. Listening skill
- d. All of the above

25. Identify the industrially processed fat

- a. Saturated fats
- b. Poly unsaturated fats
- c. Trans-fats
- d. Unsaturated fats

26. Immunity is termed as

- a. process of production of RBC
- b. raise in temperature
- c. body resistance to invading organism
- d. process of production of hormones

27. The energy created by the life instincts is known as

- a. Libido
- b. Libero
- c. Linear
- d. none of these

28. Which factor leads to less muscle mass and a slower metabolic rate, making it easier to gain weight.

- a. Ageing
- b. Exercising
- c. Dieting
- d. All of the above

29. Philip is an excellent orator among his peer group? Choose the ways of communication which made him an excellent orator

- a. Spoken words
- b. Body language
- c. Voice modulation
- d. All of the above

30. Akshatha, a 46 year old lady is characterised by poor CNS coordination, forgetfulness and tremor of hands. Identify the disease she is suffering from

- a. Epilepsy
- b. Alzheimer's disease
- c. Schizophrenia
- d. Migraine

31. The process of communication has four important stages. Identify the correct sequence of it

- a. Sender-Medium-Receiver-Response
- b. Medium- Sender-Receiver-Response
- c. Receiver -Sender-Medium- Response
- d. None of the above

32. Withdrawal symptoms are not shown by

- a. Stimulants
- b. Sedatives
- c. Hallucinogens
- d. Opiates

33. Henry has got good relationship with all his peers, family and friends. He practices regularly three 'Cs' of Healthy Relationships. Choose the correct option:

- a. Communication, Cooperation, Compromise
- b. Communication, Correlation, Compromise
- c. Communication, Cooperation, Compassion
- d. None of the above

- 34. The stimulant present in tea, cocoa and cola drinks is**
 a. Caffeine
 b. Astringent
 c. Tannin
 d. Cocaine
- 35. Which is the Vector for Malaria?**
 a. Drosophila
 b. House fly
 c. Culex mosquito
 d. Female Anopheles mosquito
- 36. Virulent factors of any pathogen are:**
 a. Pilli & Adhesins
 b. Toxins & Invasins
 c. Enzymes & antibiotics
 d. All of these
- 37. This is not a communicable disease**
 a. Chickenpox
 b. AIDS
 c. Typhoid
 d. Diabetes
- 38. Rohan was affected with inflammation of lung alveoli due to his excessive tobacco smoking which caused him a disease called**
 a. Lung cancer
 b. emphysema
 c. Pulmonary TB
 d. bronchitis
- 39. A pathogen is**
 a. a pattern of illness in population
 b. healing forces of nature
 c. any agent such as micro-organism that causes a disease
 d. a disease
- 40. The infection is transmitted through contact in STD.**
 a. Direct
 b. Non-direct
 c. Animals
 d. None

PART- B

Match the following

10X 2= 20 Marks

1. Match the following disease with the causative agent.

- | | |
|---------------|--------------------|
| i. AIDS | a. Vectors |
| ii. Malaria | b. HIV Virus |
| iii. COVID-19 | c. Vibrio cholerae |
| iv. Cholera | d. Corona Virus |

2. Match the functions of each dietary component are

- | | |
|------------------------|----------------------------------|
| i. Carbohydrates | a. Metabolism regulation |
| ii. Protein | b. Energy |
| iii. Fibre | c. Tissue growth and maintenance |
| iv. Vitamin & minerals | d. Bowel health |

3. 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 |

4. Match the appropriate

- | | |
|-----------------------|-----------------------|
| i. Physical fitness | a. 8 hours/day |
| ii. Sleep routine | b. Bath |
| iii. Physical hygiene | c. Social support |
| iv. Relationship | d. Muscular endurance |

5. Match the following diseases with their poor health-related quality of life

- | | |
|------------------------------|-------------------------------|
| i. Haemodialysis patients | a. Depression |
| ii. HIV psychiatric patients | b. Insomnia |
| iii. Myocardial Infraction | c. Suicidality |
| iv. Stroke patients | d. Sociodemographic variables |

6. Match the Personality

- | | |
|--------------------|-------------------|
| i. Optimistic | a. Adaptive |
| ii. Neurotic | b. High-achieving |
| iii. Conscientious | c. Positiveness |
| iv. Resilient | d. Self-doubt |

7. Match below addictions

- | | |
|--------------------|--------------------------|
| i. Addiction cycle | a. Substance addiction |
| ii. Alcohol | b. Behavioural addiction |
| iii. Internet | c. Happy life |
| iv. Non-addicts | d. Craving and usage |

8. Match the composition in balanced diet

- | | |
|--------------------|----------|
| i. Carbohydrates | a. 15% |
| ii. Proteins | b. 60% |
| iii. Fat | c. vital |
| iv. Micronutrients | d. 25% |

9. 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 |

10. 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 4 questions

4X10 =40 Marks

1. Geeta has BMI above 35, indicating obesity. Her family and doctor advised her to reduce weight. Suggest her on the balanced diet, eating disorders and fitness components of health.
2. Sumanth is an IIT graduate. He holds a master's degree from IIM. He was working in high position job in USA and under some circumstances, he was fired from the job. As he never faced failure in life, he goes into depression. Comment on his situation and provide holistic approach for the treatment.
3. Varun is good at studies but has poor communication skills. Give your suggestion for the improvement of his communication skills. Add a note on the impact of communication on friendship/relationship.
4. Sonal joined reputed college. Due to exposure to new surroundings, she fell into alcohol/drug addiction. Comment on how addictions develop, types and influencing factors. Add a note on how can Sonal recover from addictions.
5. What are infections and its modes? How can chronic illness affect quality of life? Add a note on the health and wellness of youth.
