



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

FINAL QUALIFYING EXAMINATIONS

OF

BACHELOR OF SCIENCE IN PHYSIOTHERAPY

COURSE CODE: BSP 437

COURSE TITLE: REHABILITATION SCIENCES PAPER II

DATE: FRIDAY 8TH DECEMBER 2023 TIME: 8:00AM TO 10:00AM

INSTRUCTIONS TO CANDIDATES

Answer all Sections

Sec A: Multiple Choice Questions (MCQ)	(20 Marks)
Sec B: Short Answer Questions (SAQ)	(40 Marks)
Sec C: Long Answer Questions (LAQ)	(40 Marks)

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 4 Printed Pages. Please Turn Over.



COMMUNITY SCIENCES

SECTION A –MCQs (10 MARKS)

1. Social group work as a method does not help
 - A. Individuals to enhance social functioning through purposeful group experience.
 - B. Community to solve problems of groups in a community.
 - C. Provide a context in which individuals help each other.
 - D. Individuals and groups to influence and change social situations
2. About common physical disabilities in childhood, which of the following is NOT progressive?
 - A. Spinal bifida cystica.
 - B. Cerebral palsy.
 - C. Spinal dysraphism.
 - D. Duchenne muscular dystrophy (DMD).
3. Which one of the following is the most important feature of the defence mechanism of Rationalization?
 - A. Going back to an earlier stage of development.
 - B. Justifying one's actions.
 - C. Magically atoning for certain acts that give rise to guilt.
 - D. Attributing one's emotions to other persons.
4. The habitual tendency to be anxious in general is called?
 - A. Trait anxiety
 - B. Generalized anxiety disorder
 - C. State anxiety
 - D. None of the above
5. Exaggerated self-importance is a feature of which delusion?
 - A. Somatic delusion
 - B. Delusion of grandeur
 - C. Delusion of reference
 - D. All of the above.
6. Personality disorder in which an individual suspects that other people will harm him, is?
 - A. Cyclothymic
 - B. Hypomanic
 - C. Melancholic
 - D. Paranoid
7. Trickle down theory of development holds that:
 - A. Global prosperity spreads to domestic economy.
 - B. Development spreads downwards through greater demand for labour.
 - C. Rate of growth of economy is inversely proportional to the rates of taxation.
 - D. None of the above
8. Which of the following is not a social process?
 - A. Accommodation
 - B. Acculturation
 - C. Annihilation
 - D. Assimilation
9. Which one of the following is not an element of rural community?
 - A. We-feeling
 - B. Cultural diversity
 - C. Territory
 - D. Self-sufficiency

- E. Community action is important after carrying out community diagnosis:
 F. (a) It builds the confidence of the people on the government.
 G. (b) It addresses some of the needs / problems identified during the survey.
 H. (c) It trains the data collector on data analysis.
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SECTION B –SAQs (10 MARKS)

1. Describe Community Based Rehabilitation Principles (5 Marks)
2. Describe the role of exercises in treatment of mental illness (5 marks)

GERONTOLOGY

SECTION A –MCQs (10 MARKS)

1. Geriatrics
 - A. Is more multidimensional than gerontology.
 - B. Uses a biopsychosocial model.
 - C. Helps the elderly gain greater insight into the meaning of life.
 - D. Focuses on preventing and managing disease in later life.
2. Sociogenic aging is based on
 - A. Folklore, prejudices, and stereotypes about age.
 - B. Biological age.
 - C. Age stereotypes.
 - D. Senescence

3. A theory that asserts that aging is structurally influenced by power dynamics and that it is socially manufactured. It emphasizes the significance of power dynamics in understanding how the elderly are perceived and treated.
 - A. Modernization Theory
 - B. Political Economy Theory
 - C. Continuity Theory
 - D. Genetic control theory
4. In order to achieve optimal nutritional status, it is recommended that older adults consume:
 - A. A high energy content diet.
 - B. A high nutrient dense diet.
 - C. A low energy content diet.
 - D. A daily antioxidant supplement
5. Gerontophilia means
 - A. Fear of aging.
 - B. Aversion of aging.
 - C. Hatred of aged.
 - D. Honoring old age.
6. Geriatric patients may require smaller doses of medications than younger patients because of:
 - A. Decreased hepatic metabolism
 - B. Decreased renal function
 - C. Decreased lean body mass
 - D. All of these
7. Self-neglect is when:
 - A. A caregiver refuses to provide necessary care to an elder.
 - B. An elder's behavior threatens his or her own health and safety.
 - C. A caregiver who has assumed responsibility of care for an elder person is incapable of providing that care.
 - D. All of the above.
8. With aging, certain changes occur in the musculoskeletal system. Which of the following changes may lead to osteoarthritis?
 - A. Changes in muscle fibers
 - B. Thinning of the cartilage in joints
 - C. Thinning of the bones
 - D. Stiffening of joints
9. What option best describes the impact of aging on cardiac health?
 - A. Decreased cardiac output
 - B. Increased elasticity
 - C. Increased cardiac output
 - D. Decreased amyloid deposits
10. Following drugs are more likely than others to cause serious Adverse Drug Reactions in older patient, EXCEPT –
 - A. NSAIDs
 - B. Anticoagulants
 - C. Benzodiazepines
 - D. Macrolides

SECTION B –SAQs (10 MARKS)

1. Describe the error theory of aging (5 marks)
2. Describe dementia as a disorder in the elderly (5 marks)

PEDIATRICS

Multiple Choice Questions (MCQs)

(15x1=15 Marks)

1. When you examine a toddler, you suggest to his mother that the activity that could foster his developmental task according to Erickson would be;
 - A. Spoon feed him every meal time
 - B. Allow him push pull toys
 - C. Read him story every night
 - D. Have him watch puppet show and TV
2. The difference between breast milk and cow milk. Breast milk contains:
 - A. Contains more protein
 - B. Contains less protein
 - C. Contains more fat
 - D. Contains less fat
 - E. Contains less carbohydrates
3. Palm-mouth reflex (of Babkin) is examined by:
 - A. Pressing by thumb to the zygomatic arch
 - B. Pressing by thumb to the sole
 - C. Pressing by thumb to the thenar regions
 - D. Lifting baby on 20 clawing baby on 20 cm
4. When we estimate general condition of newborn according to Apgar scale?
 - A. On the 1st and 5th minute of baby life
 - B. On the 1st, 2nd and 5th minute of baby life
 - C. On the 2nd and 5th minute of baby life
 - D. On the 5th and 10th minute of baby life
 - E. On the 10th and 30th minute of baby life
5. A three-year-old boy is admitted with laryngotracheobronchitis. His parents seem extremely anxious and the child is crying. Which diagnosis has the highest priority?
 - A. Potential infection
 - B. Ineffective airway clearance
 - C. Altered parenting
 - D. Impaired tissue perfusion
6. You are assigned to care for a child with cerebral palsy should obtain information concerning his abilities, limitations, interest, and habits, because the aim of therapy is to:
 - A. Develop an individualized therapeutic program that utilizes the child's assets and abilities to provide experiences that permit him to achieve success as well as help to cope with frustration and failure
 - B. Assess the child's assets and potentialities and capitalize on these in the habilitative process, while ignoring limitations
 - C. Adverse abnormal functioning and restore brain damage through rehabilitation
 - D. Provide a therapeutic program that avoids subjecting the child to frustrating experiences that decrease his achievement.
7. In planning care for a newborn with a surgical repair of a myelomeningocele, you should be aware that this child is prone to develop which of the following?
 - A. osteomyelitis
 - B. Decubitus
 - C. Otitis media

- D. Hydrocephalus
8. The physiotherapist is working in a busy pediatric ward. In which of the following cases would she maintain a high index of suspicion of physical abuse?
- A. A three-year-old female with 15% burns in a splash pattern over the face and chest reportedly sustained when she pulled on the tablecloth and a teapot fell, spilling over her
 - B. A 14-year-old male with many bruises on bony prominences, in various stages of healing. The child is reportedly clumsy
 - C. A six-year-old with a spiral fracture of the tibia and fibula which reportedly occurred while riding his bicycle
 - D. A nine-month-old next drowning, who reportedly climbed into the tub and turned on the water
9. Which is the most likely diagnosis in the following case: An infant is seen for his 6-week check and found to have a loud ejection systolic murmur in the third left intercostal space and a single second heart sound on examination. There is no obvious cyanosis but a suggestion of mild desaturation. On the Chest X Ray there is a concavity on the left heart border and decreased pulmonary vascular markings.
- A. Ventricular septal defect
 - B. Atrioventricular septal defect
 - C. Pulmonary valve stenosis
 - D. Coarctation of the aorta
 - E. Tetralogy of Fallot
10. Select the most appropriate emergency treatment for the following children: a term baby is born in poor condition. Apgar scores 3 at 1 minute and 5 minutes. CPR is commenced. At 10 minutes he remains bradycardia.
- A. Adenosine
 - B. Adrenaline
 - C. Atropine
 - D. DC shock
 - E. Dobutamine
11. Select the most appropriate oncological diagnosis from the list of options to explain the following scenario. A young child presents with fevers and a mass in the femur is noted and a diagnosis of malignancy is made. This malignancy is 30 times more common in white children compared to black children.
- A. Ewing sarcoma
 - B. Hepatoblastoma
 - C. Neuroblastoma
 - D. Teratoma
 - E. Wilm's Tumour
12. IQ (Intelligence quotient) of a child means
- A. The creative efficiency of the child
 - B. The capability of the child to perform intellectual tasks in relation to other children of same age
 - C. The efficiency of memory of child
 - D. Qualification of the learning ability of child
13. Which of the following diseases have a very close relationship with protein energy malnutrition?
- A. Tuberculosis
 - B. Measles
 - C. Diarrhea

- D. Common cold
 - E. Pertussis (whooping cough)
14. Choose the most probable diagnosis from the list of option: A 1 year old baby boy is wheezy, coughing, cyanosed and breathless with intercostal recession.
- A. Asthma
 - B. Bronchiolitis
 - C. Croup
 - D. Epiglottis
 - E. Pneumonia
15. Perioral rash, pigmentation of skin creases and neuritis is seen in deficiency of
- A. Zinc
 - B. Copper
 - C. Magnesium
 - D. biotin
 - E. Cuprum

SHORT ANSWER QUESTIONS (SAQS)

(2X5= 10 MARKS)

1. Which musculoskeletal physiology present in Down syndrome patients, interferes with rehabilitation?
2. Outline the precautions to take when administering chest physiotherapy to pediatrics below 1 year.

OBSTETRICS AND GYNECOLOGY

MULTIPLE CHOICE QUESTIONS (MCQS)

(15X1=15 MARKS)

1. The sperms are temporarily stored in which structure?
 - A. Vas deferens
 - B. Vas deferens
 - C. Epididymis
 - D. Seminiferous tubules
2. Which hormone STARTS the ovulation cycle?
 - a. Luteinizing Hormone
 - b. Estrogen
 - c. Progesterone
 - d. FSH
3. Child birth involves 3 stages, which stages occur after the cervix is dilated to 10 cm until the delivery of the baby?
 - a. Third stage
 - b. Cross over between first and Second stage
 - c. First stage
 - d. Second stage
4. ----- is a tell tale sign that labour has begun
 - a. Cramps and back pain
 - b. Decreased discharge
 - c. Intense fatigue
 - d. Hard bowel movements
5. Many women experience the urge to push during labour and delivery. What is the technical term associated with this sensation?
 - a. Ferguson reflex
 - b. Engagement
 - c. Franklin reflex

- d. Robinsons reflex
6. What is the surgical name for the cut that is made along the perineum and posterior vaginal wall during childbirth?
 - a. Caesarian
 - b. Epidural
 - c. Episiotomy
 - d. Oxytoxin
 - i. Which of the following terms describe the thinning and softening of the cervix?
 - a. Expression
 - b. Dilation
 - c. Labour
 - d. Effacement
 7. What drug is administered typically as a way to jump start contractions?
 - a. Vicodin
 - b. Paracetamol
 - c. Pitocin
 - d. Ibuprofen
 8. During birth when the foetus head becomes visible at the vaginal opening its known as what?
 - A. Crowing '
 - B. Celebrating
 - C. Cresting
 - D. Starring
 9. During labour the pituitary gland releases a hormone known as?
 - a. Oxytoxin
 - b. Insulin
 - c. Cortisol
 - d. Melatonin
 10. After the foetus is delivered, its time to deliver the placenta how long does this stage take?
 - a. 1-2 hours
 - b. 5-20 minutes
 - c. 3-4 days
 - d. 10 - 30 seconds
 11. 32 year old female with one son age 2, two daughters ages 5 & 7, one infant son delivered at 27 weeks gestation and died one week later:
 - a. G 4 P 3-1-0-3
 - b. G 4 P 4-0-0-3
 - c. G 4 P 3-0-1-4
 - d. G 4 P 4-1-0-3
 - e. G 4 P 3-1-1-3
 12. The following statements refer to the uterine fibroids. Determine which is true
 - A. 25% are asymptomatic.
 - B. Uterine fibroids are common in women with a history of parous, combined oral contraceptive or injectable progesterone
 - C. Complications of fibroids in pregnancy include premature labour, malpresentations, obstructed labour and postpartum haemorrhage
 - D. Around 1% may result in malignant change.
 13. The causes and risk factors for uterine prolapse will not include?
 - A. Nulliparity

- B. Raised BMI
 - C. Chronic cough
 - D. Ovarian cyst
14. During pregnancy oestrogen level is increased 30 times, which _____
- A. Relaxes various pelvic ligaments to accommodate the gravid uterus
 - B. Vasodilatation
 - C. Affect metabolism.
 - D. None of the above
15. During 3rd trimester one should lie in _____
- a) Supine
 - b) Side lying on left side
 - c) Side lying in right side
 - d) Crook lying

SHORT ANSWER QUESTIONS (SAQS)

(2X5= 10 MARKS)

1. Outline an exercise program targeting the cardiorespiratory fitness of a pregnant woman in her third trimester who has no comorbidities and pregnancy is progressing normally.
2. Describe the benefits of regular exercises during menopause

MANAGEMENT AND LEADERSHIP

MULTIPLE CHOICE QUESTIONS (MCQS)

(10X1=10 MARKS)

1. The Physiotherapy department in your current working hospital is in the process of developing new standard operating procedure. Why should it set new objectives?
 - a) To allow staff to concentrate on their preferences
 - b) To improve on the effectiveness of any decisions taken
 - c) To make sure customers are aware of new developments
 - d) To involve all stakeholders in decision making
2. Planning a new hospital starts with setting goals for the hospital, without which the organization cannot have a definite direction or focus. Which of the following areas is not considered by an organization while studying existing hospital facilities in an area?
 - (a) Bed ratio
 - (b) Hospital occupancy
 - (c) Physical condition of facilities
 - (d) Perception of patients
3. Centralization principle of management science has brought the existence of central sterile services department (CSSD) in large hospitals. The significance of CSSD is:
 - (a) To bring advancement in medical science to provide betterment of humanity
 - (b) To help the physiotherapist to develop leadership qualities and human relationship abilities
 - (c) To bring efficiency and economy in the centralization of sterilization of syringes activity in one location for use all over the hospital
 - (d) To help nonmedical staff to learn administrative skills
4. Harrison suggested different methods of monitoring of Physiotherapy audit. Which of the following method of monitoring is based on the primary idea of learning from mistakes?
 - (a) Peer review
 - (b) Sentinel cases

- (c) Criterion-based audit
 - (d) Surveys
5. Laboratory and diagnostic services are of paramount importance in a hospital because _____?
- (a) The relationship formed at this stage go a long way in building overall image of the hospital
 - (b) This stage forms the initial contact point between patient and the hospital
 - (c) Any amount of effort expended at this stage is less, unless one can delight the patient
 - (d) They properly receive the patients and brief them about the investigations
6. Which of these best differentiates how a leader rather than a manager influences teams?
- a) By reacting to change
 - b) By being an example
 - c) By exercising formal authority
 - d) By focusing on control
7. In the Scientific Management theory by Fredrick Taylor, which of these is important when managing hospital staff?
- a) Focusing on social and personal needs
 - b) Applying rigid rules and procedures
 - c) Having delegated authority and responsibility
 - d) Defining work ethics and values
8. A manager is coordinating a project with teams from across the organisation. What is an important responsibility for this manager?
- a) Reviewing trends
 - b) Conducting an environmental analysis
 - c) Establishing lines of communication
 - d) Setting objectives
9. Which of these is a criticism of Weber's Bureaucratic Theory of Management?
- a) Unsuitable for fast changing environments
 - b) Narrow focus on financial measures
 - c) Absence of workplace discipline
 - d) Overemphasis on staff training
10. What is the most significant rationale for using Health information system in Kenya
- a) To align objectives to values
 - b) To assess stakeholder engagement
 - c) To support managerial decision making
 - d) To encourage managerial progression

SAQ:

- | | |
|---|---------|
| 1. Outline five roles of the Physiotherapy Unit In-charge | 5 marks |
| 2. Explain five principles to be considered during delegation process | 5 marks |