ROYAL CIVIL SERVICE COMMISSION BHUTAN CIVIL SERVICE EXAMINATION (BCSE) 2024 EXAMINATION CATEGORY: <u>TECHNICAL</u> PAPER II: GENERAL SUBJECT KNOWLEDGE PAPER FOR <u>NURSING</u>

Date	: October 4, 2024	
Total Marks	: 100	
Writing Time	: 150 minutes (2.5 hours)	
Reading Time	: 15 Minutes (prior to writing time)	

GENERAL INSTRUCTIONS:

- 1. Write your Registration Number clearly and correctly on the question paper.
- 2. The first 15 minutes is to check the number of pages of the Question Paper, printing errors, clarify doubts and to read the instructions. You are NOT permitted to write during this time.
- 3. This paper consists 100 multiple choice questions of 1 (one) mark each. Specifically, this paper consist of **THREE SECTIONS**;
 - a. Section A: General health Sciences (50 questions)
 - b. Section B: Problem Solving (25 questions)
 - c. Section C: Data Interpretation (25 questions)
- 4. All questions are COMPULSORY.
- 5. All answers should be written on the Question Paper provided to you.
- 6. Circle the correct Answer. Each question carries ONE mark.
- 7. Any double circle/unclear/smudgy answers shall not be evaluated.
- 8. Note that answering questions with more than one choice will not be evaluated.
- 9. You are not permitted to tear off any sheet(s) of the Question Paper.
- 10. Use of any other paper including paper for rough work is not permitted.
- 11. You must hand over the question paper to the Invigilator before leaving the examination hall.
- 12. This paper has 21 printed pages, including this instruction page.

GOOD LUCK!

SECTION A: GENERAL HEALTH SCIENCES [50 MARKS]

Choose the correct answer and circle the CORRECT answer on the question paper. Each question carries ONE mark. Answering questions with more than one choice will not be evaluated.

- 1. The founder of modern nursing;
 - a) Dorothea Dix
 - b) Clara Barton
 - c) Florence Nightingale
 - d) Mother Teresa
- 2. The carbon, hydrogen and oxygen elements combine to form the compound Methanol which is commonly used by nurses to disinfect the skin before invasive procedures. The chemical formula for Methanol is;
 - a) C₂H₅OH
 - b) CH₃OH
 - c) C₆H₁₂O₆
 - d) $C_{12}H_{22}O_{11}$
- When the nurse checked the vital signs of a patient, she recorded the body temperature at 35.5 degree Celsius. The nurse is asked to convert the reading from degree Celsius to degree Fahrenheit (°C to °F). The formula for conversion is;
 - a) $^{\circ}F = ^{\circ}C \times 9/5 + 31$
 - b) $^{\circ}F = ^{\circ}C X 9/5 + 32$
 - c) $^{\circ}F = ^{\circ}C X 9/5 + 33$
 - d) $^{\circ}F = ^{\circ}C X 9/5 + 34$
- 4. The main cause of bedsore is due to;
 - a) Breakdown of dead cells.
 - b) Injury to the epidermis.
 - c) Cut off blood flow to the skin.
 - d) All of the above.
- 5. The management theory concept of 'scientific management' was promoted by;
 - a) Frederick Taylor
 - b) Henri Fayol
 - c) McGregor
 - d) Henry Mintzberg
- 6. The nurse is administering medications to the patient with liver failure resulting from end-stage cirrhosis. The nurse is aware that patient would most likely have problems with which pharmacokinetic phase?
 - a) Absorption
 - b) Distribution
 - c) Metabolism
 - d) Excretion

- 7. The keys to effective nursing management are;
 - a) Researcher, professional and interpersonal.
 - b) Communication, conflict management and decisional.
 - c) Research, informational and communication.
 - d) Informational, interpersonal and decisional.
- 8. The 'Good Samaritan Laws' related to nursing practice is about;
 - a) Protecting nurses from civil liability for injuries when an attempt has been made to aid patient needing medical attention during emergency.
 - b) Mandating nurses to be polite and empathetic towards patient during medical distress.
 - c) Defining the standard of care which a reasonable, prudent practitioner with similar education and experience would do or not do in similar circumstances.
 - d) Assuring the patient that information obtained by the nurse while providing care will not be communicated to anyone who does not need to know.
- 9. The specific antidote for paracetamol poisoning is;
 - a) Acetylcysteine
 - b) Flumazenil
 - c) Hyaluronidase
 - d) Activated charcoal
- 10. The ethical principle of nonmaleficence requires that;
 - a) Good be done for the benefit of the patient.
 - b) All patients are treated equally regardless of gender, sexual orientation, religion, ethnicity, disease, or social standing,
 - c) No harm be done to patient, either deliberately or unintentionally.
 - d) No patient be misled or deceived by the nurse during care.
- 11. In the Glasgow Coma Scale the highest scoring point is assigned to;
 - a) Eye opening
 - b) Best motor response
 - c) Best verbal response
 - d) Eye opening and best motor response.
- 12. The tool which is discipline- related and help nurse to operationalize patient care processes and provide a baseline for quality care and serve as the legal reference in evaluating whether a patient has received appropriate care is the;
 - a) Guidelines
 - b) Protocols
 - c) Algorithms
 - d) Standards of care

- 13. An acidosis is process that tends to cause the accumulation of hydrogen ions (H+). The value of pH of the blood that would determine the acidemia is;
 - a) < 6.35
 - b) < 7.00
 - c) < 7.35
 - d) < 7.55
- 14. The process of identifying, analyzing, treatment and evaluating real and potential hazards in Continuous Quality Improvement (CQI) is called;
 - a) Performance and Outcome management.
 - b) Actual Performance management.
 - c) SWOT Analysis.
 - d) Risk Management.
- 15. The front part of the eye is filled with clear fluid called;
 - a) Aqueous humor
 - b) Vitreous humor
 - c) Synovial fluid
 - d) Endolymph
- 16. In Bhutan, the competency of Clinical Nurse required for the "Management of Care" is;
 - a) Evaluation that measures the effectiveness of patient care.
 - b) Quality improvement and assurance
 - c) Occupational health and safety
 - d) Holistic care which composites of physical, mental, emotional and social factor.
- 17. The part of the brain which is the center for coordination of movements and postural adjustment;
 - a) Brain Stem
 - b) Cerebellum
 - c) Cerebrum
 - d) None of the above
- 18. In Bhutan, being aware of patient's cultural background to acknowledge and explore how culture affects patient and care provider relationship is the nursing activity for the competency area;
 - a) Management of care.
 - b) Patient advocacy.
 - c) Professionalism and ethical nursing practice.
 - d) Interpersonal relationship.

- 19. For professionalism and ethical nursing practice in Bhutan, a Clinical Nurse will;
 - a) Communicate effectively with patients and family in clear, concise and respectful manner to facilitate the provision of care.
 - b) Use effective counselling techniques to facilitate positive change in patient and family
 - c) Demonstrate responsibility and accountability for care within the scope of practice and level of competence.
 - d) Participate in case review activities to evaluate whether the nursing care is appropriate to the patient's health condition.
- 20. The maximal volume of air that a person can blow out of the lungs following a maximal inhalation is called;
 - a) Tidal volume.
 - b) Vital capacity.
 - c) Stroke volume.
 - d) Air capacity.
- 21. A short-term goal for a patient with Alzheimer disease is:
 - a) Regained sensory perception and cognitive function.
 - b) Improved problem-solving in activities of daily living.
 - c) Optimum functioning in the least restrictive environment.
 - d) Increased self-esteem and improved self-concept.
- 22. Inferior vena cava carries;
 - a) Oxygenated blood to the heart from the upper part of the body.
 - b) Oxygenated blood to the heart from the lower part of the body.
 - c) Deoxygenated blood to the heart from the upper part of the body.
 - d) Deoxygenated blood to the heart from the lower part of the body.
- 23. The lens used to correct the myopia is;
 - a) Convex Lens
 - b) Cylindrical Lens
 - c) Concave Lens
 - d) Lenticular Lens
- 24. Dopamine is the neurotransmitter found in the brain and it is involved in the control of;
 - a) Complex movements, motivation, cognition and regulation of emotional responses.
 - b) Attention, learning and memory, sleep and wakefulness.
 - c) Food intake, temperature regulation, pain control and sexual behaviour.
 - d) Gastric secretions, peripheral allergic responses, cardiac stimulation and alertness control of food intake.
- 25. The rationale behind the nurse explaining the procedure and ensuring patient have adequate understanding of the procedure is to;
 - a) Built interpersonal relationship between the nurse and the patient.
 - b) Maintain documentation of the procedure as a legal requirement.
 - c) Monitor patient's health behaviour and intervene for correction.
 - d) Promote patient cooperation and obtain informed consent.

- 26. All are risks associated with immobility and the nurse must perform regular assessment for all the immobile patients except the risk of;
 - a) Skin integrity and pressure sore development
 - b) Deep vein thrombosis
 - c) Urinary tract infection
 - d) Weight gain
- 27. The nurse update nursing care plan during the process of care. Choose the most appropriate rationale for the activity;
 - a) To meet health and safety legislation.
 - b) To aid good communications and acknowledge duty of care.
 - c) To ensure consistency in care delivery.
 - d) To ensure early detection of any changes in condition.
- 28. Habitual abortion is the term applied when:
 - a) Woman had at least two consecutive spontaneous abortions.
 - b) Woman had at least three consecutive spontaneous abortions.
 - c) Woman had at least four consecutive spontaneous abortions.
 - d) Woman who had abortions irrespective of number of times.
- 29. Before the start of the procedure, the nurse ensures all equipment is in place to administer care. The rationale is;
 - a) Prevention of cross-infection.
 - b) Effective use of time and resources.
 - c) Following standard operating procedure.
 - d) Promotion of patient's dignity and self-esteem.
- 30. The most appropriate nursing intervention for a woman whose weight is 51 kg with the height of 144 cms is;
 - a) Encourage to keep the ideal weight as it is.
 - b) Health education for underweight.
 - c) Health education for overweight.
 - d) Health education for obese.
- 31. Sit squarely in relation to the patient, adopt an open posture, lean in towards the patient slightly, maintain comfortable eye contact and relax while interacting with the patient is the technique adopted for effective;
 - a) Patient- nurse interpersonal relationship.
 - b) Communication with the patient.
 - c) Attention from the patient.
 - d) Avoidance of violence and aggression
- 32. Specific gravity of the urine measures;
 - a) Solute concentration in the urine.
 - b) Acidity of the urine.
 - c) Glucose in the urine.
 - d) Presence of bacteria.

- 33. In the month of March, the rate of medication error is 10%. How should a nurse interpret the statement?
 - a) It is the rate calculated from total number of medication errors by total number of discharges and death in March.
 - b) It is the rate calculated from total number of medication errors by total number of patient days in March.
 - c) Both are correct.
 - d) Both are wrong.
- 34. Ineffective breathing pattern related to decreased lung expansion as evidenced by dyspnea, coughing, difficulty of breathing is the nursing diagnosis statement under the category;
 - a) Problem-focused nursing diagnosis.
 - b) Risk nursing diagnosis.
 - c) Health promotional diagnosis.
 - d) Syndrome diagnosis.
- 35. One of the steps in the research methodology is the calculation of sample size. The significance of sample size calculation is to;
 - a) Determine the confidence level.
 - b) Determine acceptable standard deviation.
 - c) Validate the accuracy of data sources.
 - d) Maintain efficient utilization of resources and time.
- 36. Chronic obstructive pulmonary disease constitutes of;
 - a) A single disease of the respiratory system.
 - b) Two diseases of the respiratory system.
 - c) Three diseases of the respiratory system.
 - d) Four diseases of the respiratory system.
- 37. Select the indicator which is not a measure for progress of Sustainable Development Goal (SDG) 3, "Ensure healthy lives and promote well-being for all at all ages"
 - a) Environmental Health
 - b) Road Traffic
 - c) Maternal mortality
 - d) Gender Equality
- 38. In the probability sampling method, the members of the population are selected through;
 - a) Quota sampling
 - b) Stratified sampling
 - c) Snowball sampling
 - d) Convenience sampling
- 39. During pregnancy the cardiac output increases by;
 - a) 10% to 20%
 - b) 20% to 40%
 - c) 30% to 50%
 - d) 40% to 60%

- 40. When administrating a type of drug, the technique of needle insertion at 45-degree is typically made for subcutaneous injections. Select the statement which is not the reason for adjusting the angle of the needle at 45-degree;
 - a) This technique helps with quick absorption of the drug.
 - b) Patient feels comfortable and is at ease.
 - c) The angle reduces the risk of hitting the muscle.
 - d) Maintains consistency in injection technique.
- 41. The style of nursing leadership which would be most effective in an emergency is;
 - a) The Transformational Leadership.
 - b) The Situational Leadership.
 - c) The Autocratic Leadership.
 - d) The Democratic Leadership.
- 42. The function of Mitochondria is to:
 - a) Generate energy.
 - b) Control cell activity and structure.
 - c) Synthesis of lipids.
 - d) All of the above.
- 43. The intravenous Fluid Flow Rate Determination is used to calculate;
 - a) The number of drops of fluid to be infused in the body.
 - b) The type of fluids to be infused in the body.
 - c) The amount of fluid to be delivered over specific time period.
 - d) The type of fluid to be delivered over specific time period.
- 44. The nurse notices ventricular tachycardia on the heart monitor. The nurse's first action should be to
 - a) Administer intravenous amiodarone or lidocaine.
 - b) Cardiovert electrically into a more sustainable rhythm.
 - c) Determine patient responsiveness and presence of a pulse.
 - d) Immediately defibrillate the patient and provide CPR.
- 45. Identify the following rhythm



- a) tachycardia
- b) Ventricular fibrillation
- c) Junctional rhythm
- d) Unifocal PVCs

- 46. An adult client's insulin dosage is 10 units of regular insulin and 15 units of NPH insulin in the morning. The client should be taught to expect the first insulin peak:
 - a) As soon as food is ingested.
 - b) In two to four hours.
 - c) In six hours
 - d) In ten to twelve hours.
- 47. An order is written to start an IV on a 74-year-old client who is getting ready to go to the operating room for a total hip replacement. What gauge of catheter would best meet the needs of this client?
 - a) 18
 - b) 20
 - c) 21
 - d) 25
- 48. A patient needs to go up the stairs while using crutches. What finding by the nurse demonstrates the patient understands how to ambulate upstairs with crutches?
 - a) The patient moves the crutches forward up the step, then the injured and noninjured leg
 - b) The patient moves the non-injured leg forward onto the step and then moves the injured leg and crutches up
 - c) The patient moves the injured leg forward into the steps, then moves the crutches and then moves the non-injured leg
 - d) The patient moves the crutches and the non-injured leg forward to the step together and then the non-injured leg.
- 49. Erythrocytes (RBCs) are generated from precursor stem cells under the influence of what growth factors?
 - a) Reticulocytes
 - b) Hemoglobin
 - c) 2,3-DPG
 - d) Erythropoietin
- 50. The patient is a new postoperative patient and she weighs 75kgs. The nurse expects the minimal acceptable urine output to be what?
 - a) Less than 30ml/hr
 - b) 37 ml/hour
 - c) 80ml/hour
 - d) 150ml/hour

SECTION B: PROBLEM SOLVING [25 MARKS]

- 51. In 2023, the mortality from the top three disease were Alcohol Liver Diseases (129), Cerebro-vascular diseases (74) and Pneumonia (66) from the total mortality of 450 amongst 94,347 in-patient admissions in Bhutan. The gross mortality rate from these three diseases is;
 - a) 269/450 X 100
 - b) 269/94,347 X 100
 - c) 269/94,347-450 X 100
 - d) 269/94,347 + 450 X 100
- 52. In 2023, the number of cases for alcohol liver diseases in Bhutan increased slightly to 2625 from 2387 in 2022. What is the percentage of increase of cases within the last one year?
 - a) 2%
 - b) 3%
 - c) 5%
 - d) 10%
- 53. Calculate the number of nurses required to manage a general ward with 50 beds. The nurse-to-patient ratio is 1:6 with 30% additional nurses as leave reserves to cover the day offs.
 - a) 25 nurses.
 - b) 30 nurses.
 - c) 33 nurses.
 - d) 37 nurses.
- 54. A patient is prescribed 800 mg of injection Acyclovir. The nurse has 10ml of the injection which is equivalent to 1000mg. How many milliliters of the injection should the nurse administer?
 - a) 8ml
 - b) 4ml
 - c) 7.5ml
 - d) 8.5ml
- 55. A doctor orders suppository paracetomol 1gram per rectum (RP) every 6 hours prn if temperature is more 101F. Available is suppository paracetamol 325 mg. How many supp. will you administer?
 - a) 2
 - b) 3
 - c) 4
 - d) 5

- 56. You have on hand ergocalciferol (Calciferol) liquid 8000 units/2 mL. Your order reads ergocalciferol 225,000 units per oral (PO) daily. How many ml should you prepare to administer the correct dose to the patient?
 - a) 28ml
 - b) 56ml
 - c) 84ml
 - d) 112ml
- 57. A child has been prescribed Amoxicillin suspension 180 mg per oral bid for infection. The supply you have in your ward reads as 125 mg/5 mL. How many milliliters should you administer per dose?
 - a) 12.5 ml
 - b) 10ml
 - c) 9.4ml
 - d) 7.2 ml
- 58. A 62kg patient is given intravenous (IV) ceftriaxone 50mg/kg/day every 12 hours. What is the strength of single dose?
 - a) 3.1 grams
 - b) 2.50 grams
 - c) 1.55 grams
 - d) 1.25 grams
- 59. Patient weighing 50 Kg with 60% total surface body area (TSBA) burn injury is prescribed intravenous fluid Ringer Lactate (RL) amounting to 4ml/kg/TSBA for 24 hours. 50% of the fluid is to be infused in the first 8 hours and the remaining in the 16 hours. What is the rate of RL infusion in the first hour?
 - a) 0.75ml/hr
 - b) 7.5ml/hr
 - c) 75ml/hr
 - d) 750ml/hr
- 60. A patient in medical ward was prescribed 250 mL of 5% dextrose Water (D5W) to be infused over 2 hours and 45 minutes. You should regulate the IV pump for how many drops per minute (drops/minute). The drop factor is 60 drops per mL. Additionally, calculate how many mL of the fluid will the patient get in an hour?
 - a) 120 drops/min; 91ml/hour
 - b) 91 drops/minute; 91 ml/hour
 - c) 125 drops/min; 100 ml/hour
 - d) 100 drops/min ; 100 ml/hour

- 61. A patient is receiving 250ml of Normal Saline (NS) over 4 hours using a tubing with a drop factor of 10 drops per ml. A senior nurse calculates and adjusts the drop rate by counting the seconds on her watch. How many seconds should pass between the release of each drop?
 - a) 4 seconds
 - b) 5 seconds
 - c) 6 seconds
 - d) 7 seconds
- 62. A patient is ordered to received 1,000 mL of Normal Saline solution (NSS) containing Calcium gluconate 500mg to be administered at 5mg/min. How many hours/minutes will pass before you change the IV bag?
 - a) 6 hours 20 minutes
 - b) 6 hours 36 minutes
 - c) 1 hours 20 minutes
 - d) 1 hours 36 minutes
- 63. The patient's heparin drip is infusing at 11 ml/hr on an infusion pump. The bag of fluid is mixed 25,000 units of Heparin in 250 ml 5% Dextrose Water. Calculate how many units of heparin the patient is receiving hourly.
 - a) 12000 units
 - b) 1100 units
 - c) 11000 units
 - d) 1200 unit
- 64. A patient in ICU is receiving infusion Noradrenaline at rate of 10ml/hour. The nurse on the previous shift mentioned that he has diluted Noradrenaline 8mg in 50ml of D5%. How much adrenaline is the patient receiving in mcg/kg/min if the patient weighs 60 kg (1mg=1000mcg)
 - a) 26.6 mcg/kg/min
 - b) 2.66 mcg/kg/min
 - c) 0.4mcg/kg/min
 - d) 0.04mcg/kg/min
- 65. A doctor orders infusion Dopamine at 4 mcg/kg/min for patient with heart failure. What infusion rate will the nurse set in the syringe pump if the patient 70kg, if the available concentration in the unit is 200mg/50ml.
 - a) 4.2ml/hr
 - b) 42 ml/hr
 - c) 0.7 ml/hr
 - d) 0.07 ml/hr

- 66. A patient with atrial fibrillation is receiving Amiodarone infusion for 24 hours. The dose ordered is 1mg/min in the first 8 hours and 0.5mg/min in the next 16 hours. 900mg of amiodarone was diluted in 500ml of NS. At the 10th hour, what will be the rate of the infusion in ml/hour?
 - a) 33.3.ml/hour
 - b) 3.33ml/hour
 - c) 16.6 ml/hour
 - d) 1.66ml/hour
- 67. A nurse needs to prepare a 1:5 dilution of a formalin. How much of the formalin and how much water does she need to make a 300ml of diluted formalin solution
 - a) 50ml formalin in 250 ml water
 - b) 100ml formalin in 200 ml water
 - c) 5ml formalin in 295 ml water
 - d) 10 ml formalin in 290ml water
- 68. A patient's medication dose needs to be increased by 30%. If the current dose is 150mg, what will be the new dose?
 - a) 45 mg
 - b) 95 mg
 - c) 145mg
 - d) 195 mg
- 69. A doctor has ordered you to administer 2 grams of IV Magnesium sulphate stat for a patient showing signs of hypokalemia. The label on the ampules reads 'Magnesium Sulphate 2ml 50% w/v". How many ampule/s of Magnesium Sulphate will you administer to provide correct dose to the patient?
 - a) 1 ampule
 - b) 2 ampules
 - c) 3 ampules
 - d) 4 ampules
- 70. A nurse administers medication every 3 hours starting at 8 am. At what time will the medication be administered on the fifth occurrence?
 - a) 12 pm
 - b) 1 pm
 - c) 5 pm
 - d) 8pm
- 71. A patient has an intake of 240ml of juice, 360 ml of water and 480 ml of IV fluids. The patient's urine output is 600ml. What is the net fluid balance?
 - a) 480ml
 - b) 360ml
 - c) 600ml
 - d) 240ml

- 72. A sliding scale insulin order requires 1 unit of insulin for every 10mg/dl of blood glucose over 150 mg/dl. If a patient's blood glucose level is 240mg/dl, how many units if insulin should the nurse administer?
 - a) 6 units
 - b) 7 units
 - c) 8 units
 - d) 9 units
- 73. A patient in OPD clinic is prescribed with 30ml of syrup Antacid for Gastritis.

However, the patient do not have any calibrated medication measuring device at home. How will the nurse instruct the patient to measure the medicines using tablespoon (tbsp) at home?

- a) 1 tbsp
- b) 1.5 tbsp
- c) 2 tbsp
- d) 2.5 tbsp
- 74. Nurse A can complete a task on 4 hours while nurse B can complete the same task in 6 hours. If they work together. How long will it take them to complete the task?
 - a) 3 hours
 - b) 2.8 hours
 - c) 2.6 hours
 - d) 2.4 hours
- 75. Nurse has 100ml of 20% Human albumin in hand. However, the patient is prescribed 5% human albumin. How will the nurse dilute the 20% human albumin to get the required concentration?
 - a) Add 400ml NS to 100ml of 20% human albumin
 - b) Add 400 ml of NS to 50ml of 20% human albumin
 - c) Add 300ml of NS to 100ml of 20% human albumin
 - d) Add 300ml of NS to 50ml of 20% human albumin

PAPER II: GENERAL SUBJECT KNOWLEDGE PAPER FOR NURSING

SECTION C: DATA INTERPRETATION [25 MARKS]

76. The nurse incharge received regular supply of items from the central store as per the requisition. You are assigned to monitor and record the utilization of syringes and submit monthly reports. Among the four types of syringes, you would report that the most efficient rate of utilization is;

Item	Weekly Utilization of Items			
	1 st week	2 nd week	3 rd week	4 th week
Syringe (2ml)	50%	60%	25%	70%
Syringe (5ml)	20%	80%	20%	78%
Syringe (10ml)	18%	60%	30%	67%
Syringe (20ml)	10%	90%	30%	66%

- a) Syringe (2ml)
- b) Syringe (5ml)
- c) Syringe (10ml)
- d) Syringe (20ml)
- 77. As a quality focal nurse in the Ward, you are asked to present your findings of the monthly survey conducted for the last 6 months on hand hygiene compliance. Which type of graph would you choose to best represent your data?
 - a) Bar graph
 - b) Line graph
 - c) Table
 - d) Histogram
- 78. Gantt Chart is used to represent;
 - a) Trends
 - b) Timeline
 - c) Schedule
 - d) Fractions
- 79. During the data analysis the nurse researcher frequently measures the central tendency with a single value that summarizes the entire data set. This statistical measurement makes it easier to understand and compare different sets of data and it is called as;
 - a) Median
 - b) Mode
 - c) Range
 - d) Mean
- 80. If karma uses 30% of his time for nursing procedure, the measurement of angle in the pie chart is;
 - a) 30°
 - b) 56°
 - c) 108°
 - d) 120°

The following bar graph shows the total number of patients admitted in different wards of a hospital from January to April. Use the following bar graph to answer questions **81**, **82** and **83**.



- 81. What is the ratio of patients admitted in ward A and ward B in month of January and February combined?
 - a) 2:5
 - b) 3:8
 - c) 5:14
 - d) 7:12
- 82. What is the average number of patients admitted in all the wards in the month of March?
 - a) 110
 - b) 115
 - c) 120
 - d) 125
- 83. What is the percentage of increase in the total number of patients admitted in ward D in April when compared to march?
 - a) 35.0%
 - b) 33.8%
 - c) 32.5%
 - d) 31.8%

Patients	Week 1	Week 2	Week 3
Dorji	1	3	5
Dema	3	2	0
Dawa	3	3	1
Dago	2	1	2
Dechen	3	4	1
Dophu	4	1	1

The table below shows the frequency of hospital visits of five patients in three consecutive weeks. Use the table to answer questions **84**, **85** and **86**

84. What is the mode of the numbers of visits during week 1?

- a) 1
- b) 2
- c) 3
- d) 4

85. By what percent is the number of visits of the patient with most visits higher than the number of visits of the patient with the least visit?

- a) 50%
- b) 60%
- c) 70%
- d) 80%

86. What is the average number of visits made by Dema and Dawa in all the three weeks?

- a) 2
- b) 3
- c) 4
- d) 5

The following pie chart shows the annual budget allocated to different hospitals. Read the following question and answer questions **87**, **88**, **89**, **90** and **91**.



- 87. If the total budget of wards was Nu. 186,000 what is the budget for JDWNRH
 - a) 66,960
 - b) 65,960
 - c) 47,000
 - d) 46,500
- 88. What is the total budget if Trashigang hospital received Nu. 45,000?
 - a) Nu. 750,000
 - b) Nu. 409,090
 - c) Nu. 204,545
 - d) Nu. 900,000
- 89. If budget for ERRH was Nu. 20,000 what is budget for Trashigang & Phuntsholing hospital combined?
 - a) Nu. 46,400
 - b) Nu. 28,200
 - c) Nu. 13,600
 - d) Nu. 8800
- 90. If all hospital combined excluding CRRH received Nu. 550,000 how much did CRRH received separately
 - a) Nu. 176,282.05
 - b) Nu. 155,128.21
 - c) Nu. 141,025.64
 - d) Nu. 253,846.15

- 91. If budget for JDWNRH was reallocated to all other hospitals equally, how much would Phuntsholing hospital receive if total budget was Nu.250,000?
 - a) Nu. 50,000
 - b) Nu. 27,000
 - c) Nu. 90,000
 - d) Nu. 62,500

The line graph below shows the number of HAIs in 3 wards of a hospital. Answer questions **92**, **93**, **94**, **95**, **96** and **97** using the line graph



92. Which month saw the least number of HAIs in total?

- a) March
- b) April
- c) May
- d) June

93. Which 2 months had the same total numbers of HAIs?

- a) January and February
- b) February and March
- c) April and May
- d) May and June

94. On an average, how many more HAIs did Ward A have compared to ward B?

- a) 20.56%
- b) 21.03%
- c) 21.62%
- d) 22.14%

95. What was the difference in the average number of HAIs of all wards in Feb and March?

- a) 0
- b) 1
- c) 2
- d) 3

- 96. In how many months were there more HAIs in ward A than the average of all the months in ward A?
 - a) 1
 - b) 2
 - c) 3
 - d) 4

97. In what months did ward C have the same number of HAIs as ward A or ward B?

- a) January and June
- b) January and April
- c) April and June
- d) March and June

Use the following bar graph which shows the number of children (male and female) born in different years in a hospital to answer questions **98**, **99** and **100**



98. Which year had the most difference in the male and female child born?

- a) 1993
- b) 1994
- c) 1995
- d) 1996

- 99. After which year did the number of females born first begin to decline?
 - a) 1991
 - b) 1992
 - c) 1993
 - d) 1994

100. What is the ratio of the average number of male to female over the 10-years period?

- a) 51:52
- b) 52:53
- c) 53:54
- d) 54:55

TASHI DELEK