Choose the best answer from the give alternatives that best complete the question and right your choice on answer sheet.

1. A customer is waiting in the lobby for a new prescription. It's is an order for a 30 day supply tablet to be taken q.h.s (daily at bedtime). Notice an expiration date of December/2014 which is on the only bulk container in stock. Today is November 10th , 2014. At the end of what day the drug in this bulk container actually expired.
   A. November 30th
   B. December 1st
   C. December 31st
   D. January 1st
2. For Conjunctivitis, patient was prescribed the following eye drops:
   Ciprofloxacin ophthalmic 3mg/mL
   Sig: ii gtts OU q4h
   What strength of ophthalmic solution should be dispensed?
   A. 0.03% B. 30.0% C.3.00% D.0.30%
3. For an IV solutions to be isotonic, it must have similar concentration of Sodium Chloride(NaCL) for normal body cells. Which of the following concentrations is isotonic?
   A. 9.00% NaCL B.0.009% NaCL C.0.09% NaCL D. 0.90% NaCL
4. A prescription order for a drug which is supplied in 5mg tablets was filled, but not approved. The pharmacy technician asked you to approve the quantity to be dispensed. The order calls for a tapered dose therapy as follows.
   10mg po q.i.d x5days
   10mg po t.i.d x5days
   10mg po b.i.d x3days
   5mg po b.i.d x3days
   5mg po q.d x2days
   How many tablets should be in the bottle?
   A. 180 B. 90 C.60 D. 45
5. An order calls for 150 g of custom compound 2:3:5 topical ointment. How much of each ingredient is needed
   A. 24g:48g:108g
   B. 30g:45g:75g
   C. 18g:36g:126g
   D. 54g:72g:84g
6. Two solutions are combined in a 3:1 ratio to make a custom compounded solution.
   How of each is required to make 200mL of this mixture?
   A. 150mL: 50mL
   B. 125mL: 75mL
   C. 120mL: 80mL
   D. 210mL: 90mL
7. An IV has been ordered to run for 4hours at 10gtt/min with a drop factor of 20gtt/mL.

The solution in the bag is 750mg of active drug dissolved in 0.5L of D5NS. How many mg of the active drug will the patient receive in 2hours

A. 120 mg B. 45 mg C.60 mg D. 90 mg

8. For the following Sig:

i tab po tid a.c.

What would be typed on the customer's label

A. One tablet by mouth twice daily before meal
B. One capsule by mouth twice daily before meal
C. One tablet by mouth three times daily before meal
D. One capsule by mouth three times daily before meal

9. Unopened insulin should be stored in a refrigerator. Which of the following temperature range is acceptable for insulin storage

A. -20°c B. 2°c-8°c C. 8°c-15°c D. 15°c-25°c

10. An 8 year old girl was prescribed a particular drug which has an adult dosage of 2.75mg/Kg. The recommended dosage for children 5-12year old is 80% of the adult dosage. If the child weight is 34Kg. What would her dosage be

A. 75mg B. 100gm C.165mg D.412.5mg

11. A glaucoma patient has been prescribed the following:

Rx: Lantanoprost(0.005% solution)
Sig: 1gtt OU qPM

Based on the information, what Auxiliary label would go on the packaging?

A. For the eye
B. Take one tab every evening until complete
C. One drop in both eyes every evening
D. One drop in the left ear every evening

12. Which of the following **step of dispensing comes first**

A. The selection and manipulation of the medicines
B. The labeling and supply of the medicine in an appropriate container
C. The interpretation and evaluation of a prescription
D. Recording the transaction

13. Benefit of consultation to the patient by pharmacist while dispensing

A. Reduced medication error C. Reduced ADR incidence
B. Reduced noncompliance D. All of the above

14. Which one is to be avoided during Verbal communication to drug information

A. Emotion B. Medical jargons

C. Unnecessary details D. All of the above

15. **Poor communication** b/n pharmacist and patient may result in
    A. Inappropriate therapeutic decisions
    B. Patients' frustration with the health care system
    C. Patient confusion & nonadherence D. All of the above
16. Prescription papers of narcotics and psychotropic drugs should be kept for
    A. 5 Year B. 1 year C.2.year D. 6 month
17. Rx panadol, 2 tabs PRN. PRN stands for :
    A. Before meals B. Every other day C. As needed D. Immediately
18. Measures to prevent antibiotic resistance include
    A. Use antibiotics only when indicated
    B. Educating the patient to finish the full course of antibiotics
    C. Avoid using antibiotics for viral infection
    D. All of the above
19. Mr. AS, a 20 years old person is thought to suffer from motion sickness and he will start his journey after five hours. He comes to you and asks you to give him medication, which of the following drug does you recommend for Mr. AS and what will be your advice?
    A. Diphenhydramine, take as soon as vomiting begins
    B. Levodopa, take 1 hr before the journey starts
    C. Diphenhydramine, take 1 hr before the journey starts
    D. No medication is recommended
20. One is not included within drug therapeutic committee (DTC)
    A. Pharmacist B. Medical director C. Nurse's head D. None
21. One is **NOT function** of drug and therapeutic committee(DTC)
    A. Development of drug use and management policies
    B. Evaluating medicines for the formulary list
    C. Advisory role D. Procurement of drugs
22. Which one is **not the activity** of hospital pharmacy department?
    A. drug quantification C. Compounding of drug
    B. drug storage D. none
23. Which of the following drugs **should not be dispensed** without prescription?
    A. aspirin B. paracetamole C. digoxin D. A and B
24. Which one is correct about narcotics and psychotropics drugs ?
    A. They should be kept in a locked cupboard
    B. They are normal storage substances
    C. They require cold chain transportation
    D. They should be kept in a fire proof area
25. Which of the following information is NOT included in a bin card?

A. Name, strength and dosage form of a drug
B. Amount of drug received and issued
C. Price at which a drug is purchased
D. Expiry date of a drug product

26. The advantage of shaking a suspension before use is
A. To avoid sedimentation
B. To allow measurement of correct dose
C. To improve uniformity
D. All of the above

27. Which of the following drug must be prescribed by **special prescription paper**
A. Ceftriazone B. Promitazine C. Pethidin D. None of the above

28. Which of the following drug classes are **not dispensed** by pharmaceutical retail outlets/pharmacies
A. Ant-tubercular drugs
B. Antiretroviral(ART) drugs
C. Emergency contraceptives
D. A and B

29. OTC drugs can be dispensed for pediatric patient and patient with mental problem since they have wide therapeutic index
A. True
B. False

30. Select the wrong statement about the role of Pharmacist
A. Promote that medicines would be dispensed as original packs
B. Generic substitution of prescription drugs is not possible
C. Provide an effective and accurate patient education and counseling
D. Give ample verbal and written information

31. Function of Drug information centre (DIC)
A. Responding to drug information questions
B. Drug Utilization Evaluation
C. Adverse Drug Reaction Reporting
D. All of the above

32. Which of the following drug name is universally accepted?
A. Proprietary name
B. Generic/nonproprietary name
C. Brand name
D. All of the above

33. Identify **the wrong statement** about the relationship between pharmacist and clients
A. Pharmacist respects the covenantal relationship
B. Pharmacist show partiality between his patrons
C. Pharmacist not abuse his/her relationship with the patient for personal gain
D. Pharmacist Dedicate himself/herself to protect the dignity of the patient

34. Woizero Aster went to a drug shop and made verbal request for ampicillin and cough syrup for her 8 years old daughter with complaints of cough and poor appetite. As she did not have enough amount of money, she wanted to purchase **only ten capsules** of ampicillin and one bottle of cough syrup suspension. The dispenser fulfilled her request.
The dispenser **was unethical** based on the hypothetical case study; because:
    A. The dispenser should have asked her a prescription at least for ampicillin.
    B. dispensing inadequate quantity of ampicillin even with prescription is irrational.
    C. Such clients should be referred to authorized prescribers
    D. All of the above
35. A client presented an **ordinary prescription** that calls for 20 diazepam 10 mg. and 10 paracetamol 500 mg. tablets to a pharmacy. The pharmacy professional dispensed both drugs with appropriate instructions for use. But the pharmacist was unethical because
    A. Paracetamol is a psychotropic drug that should be prescribed by using prescription paper for narcotic and psychotropic drugs.
    B. Diazepam is a psychotropic drug that should be prescribed by using prescription paper for narcotic and psychotropic drugs.
    C. The pharmacy professionals should not dispense such drugs (Diazepam) based on ordinary prescriptions or verbal requests.
    D. B and C
36. Skills required for patient-centered pharmacy practice include which of the following?
    A. Therapeutic planning skills
    B. Physical assessment skills
    C. Communication skills
    D. All of the above
37. Hospitals are expected to have Formulary. This system assure the following benefits EXCEPT
    A. Sustainable access to the drugs
    B. Much experience with drugs from practitioner side
    C. Availability of most effective drugs
    D. Increased cost
38. During development of clinical practice guidelines one should consider the followings;
    A. Multidisciplinary nature of the participants
    B. Adaptability of the guideline for local condition
    C. Inclusion of best available evidence
    D. All of the above

39. Which one is NOT an outcome included in the definition of pharmaceutical care?
    A. Elimination or reduction of symptoms
    B. Arrest or slowing of disease processes
    C. Reduction of health care costs
    D. Cure of disease
40. Active listening consists of which of the following actions?
    A. Assessing the way the other person communicates
    B. Conveying an open, relaxed, and unhurried attitude
    C. Focusing on what the other person says
    D. All of the above
41. Which of the following is NOT a barrier for communication between pharmacist and patients
    A. medical jargon
    B. disability
    C. sex difference
    D. age difference
42. Which of the following actions violate(s) patient confidentiality?
    A. Discussing a patient case in a public elevator
    B. Disclosing the results of diagnostics tests to friends of the patient
    C. Allowing public access to electronically stored patient information
    D. All of the above
43. The provision of drug information involves which of the following components?
    A. Determining the primary question
    B. Developing an appropriate search strategy
    C. Assessing available information
    D. All of the above
44. A consumer asks whether her new prescription drug is the cause of her insomnia.
    What type of drug information question is this?
    A. Adverse reaction
    B. Dosing
    C. Drug administration
    D. Therapeutic use
45. A colleague asks if ipratropium bromide (Atrovent) is FDA approved for the treatment
    of asthma. What type of drug information question is this?
    A. Adverse reaction
    B. Dosing
    C. Therapeutic use
    D. Drug administration
46. Which one of the following is an example of primary literature?
    A. An original study published in the New England Journal of Medicine
    B. A review of a newly marketed drug published in the Medical Letter
    C. A drug interaction described in a drug interactions book
    D. All of the above

47. Which one of the following is an example of tertiary literature?
    A. An original study published in the New England Journal of Medicine
    B. A review of a newly marketed drug published in the Medical Letter
    C. A drug interaction described in a drug interactions book
    D. None of the above
48. Which of the following should be considered when evaluating a literature review?
    A. Publication date
    B. Criteria the author used to select the primary research articles
    C. Author expertise
    D. All of the above
49. Which of the following should be considered when evaluating an original research article?
    A. Appropriateness of the study design
    B. Clinical relevance of statistically significant results
    C. Study participant characteristics
    D. All of the above
50. Monitoring a patient's response to drug therapy requires which of the following?
    A. Knowledge of pharmacotherapeutics
    B. Knowledge of pathophysiology
    C. Physical assessment skills
    D. All of the above
51. Which one of the following is a subjective parameter?
    A. Serum creatinine level
    B. Dysuria
    C. Weight
    D. Height
52. Which one of the following is an objective parameter?
    A. Blurred vision
    B. Temperature
    C. Headache
    D. Fatigue
53. A patient had an appendectomy 40 years ago. This information belongs in which section of the patient case?
    A. History of present illness
    B. Past Medical History
    C. Social History
    D. Family History
54. Vital signs include all of the following except which?
    A. Blood pressure
    B. Cardiac output
    C. Temperature
    D. Respiratory and Hear rate
55. Which one of the following is not a fundamental physical assessment technique?
    A. Percussion
    B. Inspection
    C. Auscultation
    D. Survey
56. What information is documented regarding a suspected medication allergy?

A. The date or time the reaction occurred
B. The interventions performed to manage the reaction
C. Whether the patient has received similar medication since that time
D. All of the above

57. A group of drug selection committee select Methotrixate tablet, a drug used for treatment of cancer to be used by the respective health center . The selected drug was not prescribed and got expired. What is the most likely cause of the problem associated with selection?
    A. Availability of drug which are not relevant
    B. Availability of drug above the level
    C. Availability of brand name drug
    D. Availability of duplicate drug
58. When two or more medicines appear to be similar with respects to quality, bioavailability and stability and if the selection committee wants to compare price for the two drug. which one of the following is feasible to consider
    A. total cost of treatment
    B. unit cost of treatment
    C. drug with high cost and high quality
    D. Consider drug with low cost and lower quality
59. Dr Alemu and Dr. Alemitu are working in Doba Hospital . They used to prescribe different drug to the same clinical condition which is not recommended and it leads to decrease in the quality of the health care. Which one of the following is used to avoided the problem
    A. Ensuring affordability of drug
    B. Developing standard treatment guideline
    C. Promoting generic substitution
    D. Use principle of therapeutic substitution
60. In a given health facility if stock out occur on ORS and coartem, it is impossible to alive the patient and patient may die due to lack of these pharmaceuticals . What is the VEN category of these drugs?
    A. Normal drug B. Essential drug C. Vital drug
61. 20% of certain group of Anti infective medicine holds 20% of pharmaceutical budget and it is difficult to give the health care service without these medicines. The VEN and ABC category of these medicine respectively is
    A. Essential medicine and A medicine
    B. Essential medicine and B medicine
    C. Vital medicine and A medicine
    D. Vital medicine and B medicine
62. In the process of estimating the need the pharmacist should consider

A. Available funds
B. Capacity to deliver services
C. Storage space capacity
D. all

63. Which one of the following is not used as source of data in quantification of drug by consumption method
A. Stock records
B. Essential drug list
C. Invoices from supplier
D. Distribution report

64. In Selection of items to be stocked as standard items which one of the following should not be stocked at all time in large amount?
A. A medicine B. B medicine C. C medicine

Answer question 65, 66, 67 and 68 based on the following scenario

The pharmacist in X hospital reviewed the Bin card and he noted that 3000 vial of ceftriaxon 1g injection was consumed from Meskerem to Yekatit 2009 and it also shows that the product was out of stock for 20 days .It takes 2 months from ordering and arrival of the products

65. What type of quantification method should He/She use to quantify ceftriaxon 1g injection for the next period
A. Consumption method
B. Morbidity method
C. The adjusted consumption method
D. Service – level projection of Budget requirements

66. What is the average monthly consumption adjusted for stock out
A. 500 vial B. 500.37 vial C. 561.37 vial D. 600 vial

67. Calculate projected average monthly consumption of cefriaxone if there is 5% changes in consumption pattern
A. 589.43 B. 500.43 C. 689.43 D. 600

68. What is the safety stock level of ceftriaxon
A. 1022.74 B. 1122.74 C. 1222.74 D. 1322.74

69. Competition among supplier is used lower price of products by principle of Rule of five. Which of the following is true about rule of five
A. Availability of five generic version of product
B. Availability of five brand version of product
C. Availability of five generic substituent of product
D. All of the above

70. Prequalification of supplier is required for which of the following Procurement Methods
A. Open tender
B. Competitive negotiation
C. Restricted tender
D. Negotiated procurement

71. Purpose of an Inventory Control System is
A. To determine when stock should be ordered/issued

B. To determine how much stock should be ordered/issued
C. To maintain an appropriate stock level of all products
D. All of the above

72. Store manager in X Hospital receive two batch of amoxicillin 500mg cap with expired date of August 2017 and December 2017 from PFSA . Which store rotation technique should be used
A. FEFO B. LIFO C. FIFO

73. The manufacturer specification on cefipim 1g injection vial state that store at 8-15C. What is the storage zoning indicated
A. Deep freeze temperature
B. Cool temperature
C. Refrigerator temperature

74. The inventory control system of Ethiopia is
A. Forced-ordering max-min system
B. Continuous review max-min system
C. Two bin system
D. Standard max-min system

75. Quality of the final drug product is determined by all except
A. Price of product
B. Storage condition
C. Packaging integrity
D. all of the above

76. Quality of pharmaceutical products can be assured by careful selection of
A. Powders for reconstitution instead of injectable liquids
B. Injectable liquid instead of powder for reconstitution
C. Liquid suspension instead of powder for reconstitution
D. Capsule instead of Tablets

77. If lower level staff members in the given health facilities are competent in assessing needs and managing inventory which distribution system to be implemented
A. Pull system
B. Dependant demand system
C. Push system
D. all

78. Which one of the following products does not require cold storage
A. Hormonal preparation
B. r DNA products
C. Vaccine
D. Tablet and capsule

79. Commonly Observed Irrational Dispensing Practices include all except
A. Failure to take medication as prescribed
B. Poor prescription review / interpretation
C. Occasional dispensing of drug to wrong patient
D. Substitution of prescribed drug

80. Misuse of drugs by patient is characterized by
A. Self medication with prescription drugs
B. Sharing of drug prescribed for others

C. Misuse of antibiotics D. All of the above

81. Which one of the following is considered Unintentional non – compliance by patient
    A. Poor patient and health professional interaction
    B. Beliefs about medicine
    C. Religious observances D. Cost of prescriptions
82. Which one of the following is not Core drug use indicator
    A. Average number of drugs per encounter
    B. Percentage of drugs prescribed by generic name
    C. Percentage of encounter with an antibiotic prescribed
    D. Average drug cost per encounter
83. Which one of the following indicator used to measure degree of Polypharmacy
    A. Average number of drugs per encounter
    B. Percentage of drugs prescribed by generic name
    C. Percentage of encounter with an antibiotic prescribed
    D. Percentage of encounter with an injection prescribed
84. According to WHO drug use indicator which one of the following is Facility indicators
    A. Availability of copy of EDL or formulary
    B. Availability of key drugs D. A and B
    C. Average dispensing time E. B and C

Answer question number 85, 86 and 87 based on the following table

Patient name	Total No. of drug per prescription	Antibiotic	Injection
Mr. A	5	Yes	Yes
Mr. B	3	No	Yes
Mr. C	4	Yes	Yes
Mr. D	4	Yes	No
Mr. E	2	No	Yes

85. What is average number of drugs per encounter
    A. 1.6 B. 2.6 C.3.6 D. 4.6
86. What is percentage of encounter with an antibiotic prescribed
    A. 50 % B.60% C. 70% D. 80%
87. What is percentage of encounter with an injection prescribed is
    A. 40 % B. 60% C. 70% D.80%
88. Which one of the following qualitative methods to investigate problems of drug use is useful for a large sample respondents

A. Structured Questionnaires
B. Structured Observation
C. Focus Group Discussion
D. In-depth Interviews

89. Which one of the following is/are Problems with drug donations
    A. Donated drugs are often not relevant for the emergency situation
    B. Health workers are not always familiar with donated drugs
    C. Donation of returned drugs
    D. All of the above

90. Which ethical principle represents the description of letting the patients to have the final decision, even if it is not in their best interest like refusing treatment, being adherent or not, etc?
    A. Beneficence B. Fidelity C. Autonomy D. Confidentiality

91. Which ethical principle describes the right of patients to receive services that are in their best interest?
    A. Fidelity B. Beneficence C. Honesty D. Autonomy

92. Not causing harm to others which includes the concept of not harming self or acting in ways that would cause harm to others defines _____ principle
    A. Nonmaleficence B. Beneficence C. Justice D. Fidelity

93. Which one of the following is NOT the advantage of patient counseling?
    A. Promotes adherence to medications
    B. Enhances future hospital admissions
    C. Helps patients cope with their disease and any medication side effects that might occur
    D. Avoids potential drug interactions with OTC, herbal, and prescription medications

94. When quantifying the value of a clinical pharmacy service, your goal is to express the benefits associated with this service in a dollar value. Which economic evaluation method would you employ?
    A. Cost-benefit analysis
    B. Cost-effectiveness analysis
    C. Cost-minimization analysis
    D. Cost-utility analysis

95. The economic evaluation method known as cost-effectiveness analysis would be best applied in which of the following cases?
    A. When comparing two or more treatment alternatives that differ in humanistic outcome
    B. When comparing two or more treatment alternatives that are equal in clinical outcome

C. When comparing two or more treatment alternatives that differ in clinical outcome
D. When comparing two or more treatment alternatives that differ in cost

96. The appropriate use of cost-minimization analysis requires which of the following to be true?
    A. Costs must include measures of lost productivity
    B. Outcomes must be adjusted for quality of life.
    C. Data must be obtained from similar sources
    D. Consequences for each alternative must be equivalent.
97. Pharmacoeconomics addresses which aspects of health care interventions:
    A. Clinical
    B. Economic
    C. Humanistic
    D. All of the above
98. Concern of Health Economics
    A. The allocation of resources to various health promoting activities
    B. The efficiency with which resources are allocated and used for health purposes
    C. The effect of preventive, curative and rehabilitative health services on individuals and society.
    D. All of the above
99. A diagnostic device that assists diabetic patients by recording blood glucose level is
    A. Stethoscope
    B. Glucometer
    C. Sphygmomanometer
    D. microscope
100. A medical device used to measure blood pressure is
    A. Stethoscope
    B. thermometer
    C. Endoscope
    D. sphygmomanometer