Department of Medical Education - Khyber Medical University Institute of Medical Sciences, Kohat

Block J (Theory Paper) – 4th Year MBBS

DO NOT WRITE ANYTHING ON THE QUESTION-SHEET – Mark Your Answers on the Bubble Sheet Provided

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1. A 20 year old patient in emergency had fever, neck stiffness and vomiting for 3 days. At his age, a common etiologic agent of this disease is Neisseria meningitides. What is your diagnosis:
a. Tuberculous meningitis (b.) Acute bacterial meningitis c. Viral meningitis d. Viral encephalitis e. Brain tumour

2. A man admitted in Medical ward with Headache, fever, pronounced neutrophilia, a high CSF protein level, and a low glucose concentration all point to bacterial meningitis. He is an injection drug user for a long time. What is the most likely pathogen in this patient?
a. Staphylococcus aureus (b.) Listeria c. HSV 1 d. Tubercle bacilli e. Cryptococcus neoformans

3. A 12-year-old boy develops fever, accompanied by occasional headaches, malaise, fatigue, and nausea a month after being bitten by a dog. Afterwards, he experiences episodes of rigidity, hallucinations, breath holding, and difficulty swallowing because of uncontrollable oral secretions. Which of the following histologic findings in the brain of the dog is most likely to be present?
a. A Multinucleate giant cells b. Negri bodies (c.) Perivascular lymphocytes
d. Pseudocysts with bradyzoites e. Spongiform change

4. Which area of brain is most severely affected by herpes simplex encephalitis?
a. Brain stem b. Occipital lobes c. Parietal lobes (d.) Temporal lobes e. Frontal lobes

5. An autopsy was done of a patient to determine the cause of death. The brain of this patient was moderately atrophic. Biopsy was taken for histology. Which of these accumulations in brain tissue is found in Alzheimer type dementia?
(a.) Lewy bodies b. Neurofibrillary tangles c. Pick bodies d. Polyglutamine aggregates e. Rossetes formation

6. An 11-year-old girl has had increasing headaches upon awakening for the past month. On examination, papilledema is present bilaterally. MRI of her brain reveals a 3-cm solid circumscribed mass within the fourth ventricle and obstructs the flow of CSF. What is this tumour likely to be?
a. Astrocytoma (b.) Ependymoma c. Glioblastoma d. Medulloblastoma e. Schwannoma

7. A 10year old girl develops ataxia and hydrocephalus. CT Scan shows midline cerebellar mass. What is the likely diagnosis?
a. Astrocytoma b. Meningioma c. Neurofibroma (d.) Medulloblastoma e. Glioblastoma multiforme

8. Glucose content of CSF is unaltered by which type of Meningitis?
a. Acute pyogenic meningitis (b.) Viral meningitis c. Tuberculous meningitis d. Cryptogenic meningitis e. Neisseria meningitis

9. On histological examination of a slide of patient with peripheral nerve sheath tumour, Schwannomma the findings to be recorded are?
a. Antoni A B pattern of cells b. Endoneurial fibroblasts (c.) Rosenthal fibers d. Cribriform pattern e. Arachnoid granulations

10. A 64-year-old man begins to show behavioural changes and irritability and is found wandering in the park near his home. On neurological examination, there is evidence of mild aphasia and cognitive dysfunction, but motor function is preserved. CT scan of the head demonstrates selective atrophy of the cortex of the frontal lobes. Which of the following is the most likely diagnosis?
A. Alzheimer's disease (b.) Multiple sclerosis c. Stroke d. Parkinson's disease e. Amyotrophic lateral sclerosis ALS

11. A 54 year old male patient presents to the Neurology O P with complaints of slowness of movements, resting tremors, postural instability, rigidity and memory loss. The features in this patient are suggestive of?
a. Multi infarct dementia (b.) Parkinson's disease c. Alzheimer's disease d. Huntington's Disease e. Alcohol encephalopathy

12. Patient presented with abnormal posture, wide gait. He is unable to perform rapidly alternating tasks, vertigo or dizziness and Balance problems. He also complains of double vision and involuntary eye movements (nystagmus. What is the likely diagnosis?
A. Parkinsonism (b.) Cerebellar lesion c. Wilson's disease d. Sub thalamic nucleus lesion e. Wernicke encephalopathy

13. A 25 year old man presents with brief episodes of loss of vision in her left eye, paraesthesia, and clumsiness in her hands. She states that these episodes come and go. MRI brain reveals paraventricular plaques of demyelination in the central nervous system white matter. A CSF tap is performed which reveals increased immunoglobulin, manifesting as multiple oligoclonal bands. What is the probable diagnosis?
(A.) Multiple Sclerosis b. Creutzfeldt Jakob disease c. Ependymoma d. Huntington's disease e. Transient ischemic attacks

14. Following a street fight a 22-year-old man is brought unconscious to the emergency department. Several minutes earlier he had been hit on the head with a heavy iron club and had been briefly unconscious but had then apparently recovered. One or two minutes later he had again lost consciousness. Which of the following is the most likely diagnosis?
(a) Epidural hematoma b. Sub-arachnoid haemorrhage c. Subdural hematoma d. Transient ischemic attack e. Stroke

15. A 45-year-old man presents with involuntary facial grimaces and movements of the fingers. His mother had similar symptoms beginning at about the same age. Her disorder had progressed to dancing movements, writhing of the arms and legs, and eventually coma and death. His maternal grandfather had similar disorder. What could be the probable diagnosis?
a. Pick's disease b. Huntington's disease (c) Parkinson's disease d. Alzheimer's disease e. Sub cortical leukoencephalopathy

16. Which medication is a glutamate receptor antagonist that can be used in combination with an acetylcholinesterase inhibitor to manage the symptoms of Alzheimer's disease?
(a) Rivastigmine b. Ropinirole c. Fluoxetine d. Memantine e. Donepezil

17. Which of the following agents is available as a patch for once daily use and is likely to provide steady Drug levels to treat Alzheimer's disease?
a. Rivastigmine b. Donepezil c. Memantine (d) Galantamine e. Glatiramer

18. Which of the following is the only medication that is approved for the management of amyotrophic lateral sclerosis?
a. Pramipexole (b) Selegiline c. Galantamine d. Riluzole e. Glatiramer

19. Which of the following medications reduces immune system-mediated inflammation via inhibition of pyrimidine synthesis to reduces the number of activated lymphocytes in the CNS?
a. Riluzole (b) Rotigotine c. Teriflunomide d. Dexamethasone e. Depyrimidase

20. Which of the following agents may cause tremors as a side effect and thus, should be used with caution in patients with Parkinson's disease, even though it is also indicated for the treatment of dementia associated with parkinson's disease?
(a) Benzotropine b. Rotigotine c. Rivastigmine d. Dimethyl Fumarate e. Acetaminophen

21. Which of the following agents exerts its therapeutic effect in multiple sclerosis via potassium channel Blockade?
a. Dalfampridine (b) Donepezil c. Riluzole d. Bromocriptine e. Alpha-potasipine

22. Benzodiazepines can be used to treat all the following conditions except?
a. Seizures b. Prior to an invasive procedure c. Anxiety (d) Alzheimer's disease e. Insomnia

23. The antidote for Benzodiazepines is what medication below?
a. Protamine Sulphate b. Acetylcysteine c. Physostigmine (d) Flumazenil e. Fomepizole

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25. Which of the following antianxiety agents cause least sedation?
a. Diazepam (b) Buspirone c. chlordiazepoxide d. meprobamate e. Oxazepam

26. Sibutramine is used in the treatment of
(a) Partial Seizures b. Alcoholism c. endogenous depression d. attention deficit hyperactivity disorder e. obesity

27. Which of the following sedative–hypnotic agents utilizes melatonin receptor agonism as the mechanism of action to induce sleep?
a. Zolpidem b. Eszopiclone (c) Ramelteon d. Estazolam e. Diphenhydramine

28. All of the following agents may cause cognitive impairment, including memory problems when used at recommended doses except?
(a) Diphenhydramine. b. Zolpidem c. Alprazolam d. Phenobarbital e. Ramelteon

29. Which one of the following drugs has the greatest potential for causing new memory impairment (anterograde amnesia)?
a. Flurazepam b. Temazepam (c) Quazepam d. Estazolam e. Triazolam

30. Which antipsychotic drug requires blood monitoring to detect agranulocytosis?
a. Clozapine b. Haloperidol c. Olanzapine d. Loxapine (e) Phenothiazine

31. A 60 years old male presented with progressive difficulty in movements for the last 5 years. His movements were very slow and he was unable to maintain his steady posture. For the last 2 years his memory is also getting impaired gradually. On examination his BP was 140/85 mm Hg. He had mask like appearance, monotonous speech. His gait was festinant and shuffling with poor arm swing. He had moderate cognitive impairment on mini-mental state. What is the most likely Diagnosis?
a. Alzheimer's disease b. Depression c. Hypothyroidism d. Lewy bodies dementia (e.) Parkinson Diseases

32. A 58 years old male patient, who was previously treated for brain tumour, presented with recurrent abnormal jerking of right upper limb. There is no loss of consciousness. EEG shows focal rhythmic seizure pattern localized to left parietal region. What is the drug of choice for this patient?
a. Carbamazepine b. Valproate c. Zonisamide d. Clonazepam (e.) Flagabine

33. A 30 years old lady presented with sudden onset weakness of both lower limbs. A few weeks ago, she was hospitalized for gastroenteritis. O/E, muscle bulk was normal, tone was reduced, power was 1/5 in lower limb and 4/5 in upper limbs. Deep tendon reflexes were absent, with no sensory level. CSF findings showed cells 60/mm³, Protein 72 mg/dl, sugars 60 mg. TPHA negative and Serum K was 3.7 meq/L. What is the most likely diagnosis?
a. Botulism (b.) Guillain-barre syndrome c. Hypokalemic periodic paralysis d. Poliomyelitis e. Transverse myelitis

34. A 60 years old lady, known cases of Diabetes mellitus, presented with dizziness, Ataxia, falling toward right side. O/E BP is 160/90 mm Hg, GCS of 15/15. Patient had nystagmus, ptosis, miosis, and decreased sweating on right side with impaired pain and thermal sense over left side of body. Cerebellar signs were present on right side of body. Which cerebral artery is responsible for the signs and symptoms of this patient?
(A.) Anterior cerebral artery b. Lenticostriate artery c. Middle cerebral artery
d. Posterior Cerebral artery e. Vertebral artery

35. Which of the following statement/s best explains a mentally healthy person?
(a.) Has self-respect and accepts his shortcomings b. Able to like and trust others
c. Able to think for himself and take his own decisions d. All of the above

36. Deficiency of which of the following micronutrient is associated with mental disorders
a. Niacin (vitamin B3) b. Iodine (c.) Thiamine d. All of the above

37. Risk factors of coronary heart diseases are divided into modifiable & non-modifiable risk factors. Which one of is a non-modifiable risk factor:
(a.) Age b. Diabetes c. Elevated serum cholesterol d. High blood pressure

38. One of the techniques to identify high risk hypertensive people is known as "tracking of blood pressure". This tracking should be aged at:
a. Neonates b. Infancy c. Children (d.) Middle age

39. Rabies is an important health problem in developing countries. What is the most logical and cost-effective approach to control this problem
a. Elimination of stray dogs combined with immunization of domestic dogs (b.) Health education for prevention of rabies
c. Inclusion of anti-rabies immunization in EPI d. Registration of all domestic dogs

40. In an outbreak of cholera in a village of 2,000 population, 20 cases have occurred and 5 died, Case fatality rate is
a. 1% b. 0.4% c. 5% (d.) 25%

41. When total number of deaths due to measles is presented in relation to the total cases of measles, it is best labeled as:
a. Cause specific death rate b. Incidence rate c. Prevalence rate (d.) Case fatality rate

42. An expert in the field of public health is required to estimate the magnitude of a health problem. Which rate would he calculate for this?
a. Incidence (b.) Prevalence c. Case fatality d. Proportionate mortality

43. When a new treatment is developed that delays deaths but does not produce recovery from a chronic disease, which of the following will occur
a. Prevalence of the disease will decrease b. Incidence of the disease will increase
(c.) Prevalence of the disease will increase d. Incidence of the disease will decrease

44. If the number of deaths from tuberculosis is expressed in relation to the total mid-year population, it is
(a.) Cause specific death rate b. Case fatality rate c. Proportionate mortality rate d. Crude death rate

45. Prevalence measures the burden of disease in a population inclusive of old & new cases. Prevalence of a disease can be obtained from:
(a.) Quasi – experimental study b. Cross – sectional study c. Case – control study d. Cohort study

46. An epidemiologist is assigned to conduct a study on 5000 people having hypercholesterolemia and those having normal lipid profile. He has to keep track of all the participants to observe the development of stroke in these patients to confirm that hypercholesterolemia increases the risk of stroke. This study is

a. Retrospective cohort study b. Retrospective study c. Prospective study d. Cross - sectional study

47. An epidemiologist wants to find out the strength of association between the risk factor and the disease. The most appropriate indicator for this purpose is

a. Disease specific rate b. Incidence rate c. Cumulative attack rate d. prevalence rate

48. At the end of year 2021, a community had a population of 8000, with 400 cases of tuberculosis. Next year at the end of 2022, population was 8100, and 200 new cases were detected and 10 cases died. Based on the data, all of the following rates can be calculated except

a. prevalence b. incidence c. proportional mortality d. case fatality

49. The extent to which a test measures what it was originally designed to measure is described as

a. Sensitivity b. Specificity c. Validity d. Reliability

50. True about Simple Random Sampling is

a. every person has an equal chance of selection b. less number of samples are obtained
c. none has an equal chance of being selected d. both (a) and (b)

51. A 28 year old man was admitted 2 hours after ingestion of 1 to 1.5 g of unknown poison. He had a Glasgow Coma Score of 14/15 and was severely agitated and in mild respiratory distress, blood pressure was 200/80 mmHg, pulse 110/min, and peripheral pulses weak. He had generalized hyperactive reflexes and had several generalised tonic clonic convulsions in the emergency department.

a. Alcohol intoxication b. Carbamates poisoning c. Organophosphorous poisoning d. Nux vomica poisoning

52. One of the followings produce toxic hypothermia

a. Salicylates b. Antipholinergics c. Antidepressants d. Opioids

53. "Benzodiazepines" act on the CNS through the following mechanism

a. increasing catecholamines b. increasing serotonin c. increasing the activity of GABA d. Decreasing the activity of GABA

54. Pathological jealousy is diagnostic of

a. Cocaine intoxication b. Cannabis intoxication c. Alcoholic intoxication d. Tobacco intoxication

55. All of the following are associated with psychosis, EXCEPT

a. Delusion b. Depression c. Phobia d. Mania

56. Rave drug is?

a. Cannabis b. Hashish c. Ecstasy d. Heroin

57. A 34 year old rickshaw puller has been using heroin for the past ten years. One evening his family members found him unconscious. He was brought to the casualty. On examination he had tachycardia, shallow breathing, constricted pupils. His blood pressure was 100/70 mm of Hg. He had brisk bilateral deep tendon reflexes. The plantar reflexes were flexor on both sides. Which of the following is the best treatment for him?

a. Buprenorphine b. Flumazenil c. Methadone d. Naloxone

58. A 39 year old Carpenter has taken two bottles of liquor from the local shop. After about and hour, he develops confusion, vomiting and blurring of vision. He has been brought to the emergency department. He should be given

a. Naloxone b. Diazepam c. Flumazenil d. Ethyl alcohol

59. A person was brought by police from the railway platform. He is talking irrelevant. He is having dry mouth with hot skin, dilated pupils, staggering gait and slurred speech. The most probable diagnosis is

a. Alcohol intoxication b. Carbamates poisoning c. Organophosphorous poisoning d. Dhatura poisoning

60. Contre coup injuries are seen in

a. Brain b. Chest c. Abdomen d. Limbs

The End