NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY
(Affiliated to Pokhara University)
Bachelor of Business Administration (BBA)
Entrance Examination

Name of Student:…………………………………………………..

Entrance Roll Number:………………………………………….

Program:………………………………………………………

FULL MARKS: 100   **TIME:** 2.5 Hrs.

INSTRUCTIONS

1. Check carefully the entrance booklet immediately after you receive it and be ensured that it does not have any unprinted or torn or missing pages or items etc. if so, get it replaced from your invigilator with a complete one.

2. For each question, there are four alternative responses given. Select only one response (even in the cases where you feel that there is more than one correct response)

3. **Choose the correct answer and tick (√) on the attached Answer Sheet. All questions carry equal marks.**

4. Keep your cellular phone completely switched off during the examination.

5. All rough work to be done only on blank sheet of question paper

6. Any candidate found violating the instructions and receiving/giving any form of help will be disqualified from the entrance examination.

Signature of Invigilator

Mathematics

1. What is the cardinality of the power set of the set $\{0,1,2\}$?
   - a) 8
   - b) 6
   - c) 7
   - d) 9

2. The value of $\log_a a$ is
   - a) 1
   - b) 2
   - c) 0
   - d) a

3. The value of $27^{\frac{2}{3}} - 16^{\frac{-3}{4}}$ is
   - a) $\frac{8}{71}$
   - b) $\frac{9}{75}$
   - c) $\frac{75}{9}$
   - d) $\frac{71}{8}$

4. How many numbers of 4 different digits can be formed out of the integers 1,2,3,4,5,6 ?
   - a) 360
   - b) 200
   - c) 150
   - d) 120

5. In what time will the interest on a sum of money at $13\frac{1}{3}\%$ be $\frac{1}{3}$ of the principal ?
   - a) 4.5 yrs
   - b) 3.5yrs
   - c) 2.5yrs
   - d) 1.5yrs

6. If $a^3 - 7a^2 + a = 0$, then the value of $a + \frac{1}{a}$ is
   - a) 3
   - b) 5
   - c) 7
   - d) 9

7. If A and B be any two matrices, then which of the following is true ?
   - a) $(AB)^T = AB^T$
   - b) $(AB)^T = A^T B^T$
   - c) $(AB)^T = B^T A^T$
   - d) $(AB)^T = BA$

8. The slope of the straight line $mx - y + c = 0$ is
   - a) 1
   - b) m
   - c) -m
   - d) mc

9. If $a:b = 2:3$ then the duplicate ratio of $a:b$ is
   - a) $4:6$
   - b) $6:9$
   - c) $4:9$
   - d) $4:5$

10. Two coins are tossed simultaneously. Find the probability that the coins show one head and one tail.
    - a) $\frac{1}{2}$
    - b) $\frac{1}{3}$
    - c) $\frac{1}{4}$
    - d) 1

11. HCF of $x^2 + 5x + 6$ and $x^2 - x - 6$ is
    - a) $x + 2$
    - b) $x + 3$
    - c) $(x^2 - 4)(x + 3)$
    - d) $(x + 3)^2$

12. The solution set of $|x| = 1$ is
    - a) $\{1\}$
    - b) $\{-1\}$
    - c) $\{-1,1\}$
    - d) ϕ

13. If the observations are 10 and -10 then their geometric mean is
    - a) 10
    - b) -10
    - c) 0
    - d) none

14. The value of $\int \log x\, dx$ is
    - a) $\log x + C$
    - b) $x(\log x - 1) + C$
    - c) $\log x - x + C$
    - d) $\log x - 1 + C$

15. The differential coefficient of $(ax^2 + b)^3$ is
    - a) $6a(ax^2 + b)^2$
    - b) $6ax(ax^2 + b)^3$
    - c) $6ax(ax^2 + b)^2$
    - d) $6ax(ax^2 + b)^4$

16. The value of the $\lim\limits_{x \to 2} \frac{x^5 - 32}{x^4 - 16}$ is
    - a) 5
    - b) $\frac{5}{2}$
    - c) $\frac{10}{3}$
    - d) 0

17. If an article bought at Rs. 16, is sold Rs. 12, find % loss in SP.
    - a) 25%
    - b) 30%
    - c) $33\frac{1}{3}\%$
    - d) 40%

18. A,B and C had invested Rs. 3000 , Rs. 4000 and Rs. 5000 respectively in the business. If the total profit was Rs. 3000, then the share of profit of B is
    - a) Rs.1000
    - b) Rs.750
    - c) Rs.1250
    - d) Rs.1150

19. $x^2 - y^2 + 2y - 1$ is equal to
    - a) $(x - y)(x + y)$
    - b) $(x^2 - y^2)(2y - 1)$
    - c) $(x + y - 1)(x - y + 1)$
    - d) None

20. The number of selections of 1 student out of 40 students are
    - a) 1
    - b) 10
    - c) 30
    - d) 40

English

A. Choose the correct expression for the following statements.

21. To let the grass grow under one's feet
    - a) To take advantage of situation
    - b) To work on a job below the dignity
    - c) To work cautiously
    - d) To idle away time

22. To come off with flying colors
    - a) A good start
    - b) To achieve distinction
    - c) Good result of constant effort
    - d) To attend grand party

23. The time is running out, you must look sharp
    - a) Be punctual
    - b) Be careful
    - c) Be sensible
    - d) Make haste

24. The speaker gave a bird's eye view of the political conditions in the country
    a) A biased view   c) a general view
    b) A personal view   d) a detailed presentation
25. Undue favor to relatives
    a) Nepotism   c) bribe
    b) corruption   d) apartheid
26. The students organized a…………
    a) feat   c) feet
    b) fete   d) fate
27. Ranjita was ……………with her own petard and faced defeat
    a) hoist   c) hoisted
    b) confronted   d) reviled
28. The consignment was…………………against damage in transit.
    a) assured   c) insured
    b) insurance   d) ensured
29. As a result of …………many unsuitable candidates were selected for the post
    a) weakness   c) favouritism
    b) humility   d) tolerance
30. He seldom does the class work, ………….. ?
    a) doesn't he   c) don't he
    b) does he   d) won't he
31. The citizens should not murmur………new taxes.
    a) over   c) upon
    b) with   d) against
32. If she…………………….me a question, I'd have answered it.
    a) ask   c) had asked
    b) asked   d) will ask
33. The synonym of the word astonish is……………….
    a) stupid   c) vague
    b) surprise   d) stubborn
34. The antonym of the word disguise is…………..
    a) succeed   c) lazy
    b) reveal   d) straight

35. Identify the word which is spelled incorrectly.
    a) disgruntled   c) fenciful
    b) glamour   d) sanitary

Read the following passage carefully and choose the best answer to each question. [For Q.N 36-40]

Speech is great blessings it can also be great curse, for while it helps us to make our intentions and desires known to our fellows, it can also if we use it carelessly, make our attitude completely misunderstood. A slip of the tongue, the use of unusual word, or of an ambiguous word, and so on may create an enemy where we had hoped to win a friend. Again, different classes of people use different vocabularies, and the ordinary speech of an educated may strike an uneducated listener as pompous. Unwittingly, we may use a word which bears a different meaning to our listener from what is does to men of our class. Thus, speech is not a gift to use lightly without thought, but one which demands careful handling. Only a fool will express himself alike to all kinds and conditions to men.

36. The best way to win a friend is to avoid
    a) irony in speech   c) pomposity in speech
    b) ambiguity in speech   d) verbosity in speech
37. While taking to an uneducated person, we should use
    a) simple vocabulary   c) high vocabulary
    b) sweet speech   d) polite language
38. If one used the same style of language with everyone, one would sound
    a) Flat   c) democratic
    b) Foolish   d) boring
39. A' slip of the tongue' means something said
    a) wrongly by choice   c) unintentionally
    b) without giving proper thought   d) to hurt another person
40. Speech can be curse because it can
    a) create misunderstanding   c) hurt others
    b) lead to carelessness   d) reveal our intentions

Logical Reasoning

41. What are the three numbers whose sum of addition and multiplication is the same?
    a) 0, 2, 3   c) 1, 3, 5
    b) 1, 2, 3   d) 4, 5,6

42. Find out what should come in place of the question mark (?) in the following number series: 3, 4, 7, 8, 11, 12 ?
    a) 7   c) 10
    b) 14   d) 15

43. Find out such a number which is the same when 75 is added to the 75 %of the number?
    a) 100   c) 200
    b) 300   d) 400

44. A is son of B, B is mother of C and C is the daughter of D; what is D to A.
    a) father   c) son
    b) mother   d) daughter

45. Find out the word which is different from the other three words.
    a) hair   c) wool
    b) feathers   d) grass

46. 'Don't take sugar because you have diabetes' logically similar to
    a) Don't read as you have weak eyesight
    b) Don't play as you are hurt
    c) Don't sing as you have hoarse throat
    d) Don't speak as you are not asked to speak

47. "Work hard to earn money" is logically similar to
    a) do not cheat to make profits   c) buy lotteries
    b) invest to amass wealth   d) study to pass in distinction

48. If the day after tomorrow is Friday; what day was it yesterday?
    a) Tuesday   c) Thursday
    b) Wednesday   d) Monday

49. If DEFY is coded as 40, what should be the code for TRAP?
    a) 45   b) 55   c) 35   d) 65

50. In code language if GOOD MORNING is written as 11, GOOD AFTERNOON as 13 what is written for GOOD NIGHT?
    a) 9   b) 10   c) 11   d) 12

General Knowledge

51. Which text was awarded with 'Madan Puruskar 2075' ?
    a) Khalangama Hamala   b) Aina   c) Seto Dharti   d) Ranahar

52. Who was the winner of ICC world cup cricket 2019?
    a) Australia   b) India   c) New Zealand   d) England

53. Which is the international sports competition that is held only in Nepal?
    a) Hatti polo   b) Dandi-biyo   c) Kabaddi   d) Mountain race

54. Who is the first player to get chance to play in IPL cricket ?
    a) Sndeep Lamichane   c) Sakti Gauchan
    b) Paras Khadka   d) Gyanendra Malla

55. Who is the winner of 2019 Wimbledon Men's tennis single?
    a) Novak Djokovic   c) Roger Federer
    b) Rafael Nadal   d) Robert Farah

56. Which robot received Citizenship first time in the World?
    a) Sofia   b) ASIMO   c) Pepper   d) Neo

57. Which is the Tallest waterfall of Nepal?
    a) Rupse   b) Namaste jharna   c) Jalbire   d) Pachal Jharna

58. Where is The apple capital of Nepal?
    a) Dolpa   b) Marpha Mustang   c) lumle Kaski   d) Manag

59. Who is the Nepali lady to receive Howard Hero-2019 award?
    a) Sangina Baidhya   c) Anuradha koirala
    b) Puspa Thapa   d) Santoshi Basnet

60. What is Biggest International Financial institute?
    a) World Bank   b) IMF   c) IFC   d) ADB

61. When UNO was established?
    a) 24 October 1945   c) 20 October 1944
    b) 12 Jun 1946   d) 7 march 1943

62. Which bank in Nepal first introduced ATM ?
    a) Kumari Bank
    b) Himalayan Bank
    c) Bank of Kathmandu
    d) Standard Charted bank

63. Who is called the father of electricity?
    a) Michael Faraday
    b) Right brothers
    c) Elbert Einstein
    d) Gram bell

64. When Nepal was credited for One day International cricket?
    a) 2017 jun 12
    b) 2019 Apr 1
    c) 2018 March 15
    d) 2018 jan 23

65. What will be the inflation rate for the year 2076/77 as per the monetary policy published by Nepal Rastra Bank on 2076 Shrawan 8?
    a) 6 %   b) 5%   c) 6.5   d) 7%

66. What is the currency name first brought in use by Mandev?
    a) Mohur   b) Fukadam   c) Manank   d) Matrica

67. Who built Krishnna Temple of Patan, Nepal?
    a) Siddhi Narasigha Malla
    b) Anshu Barma
    c) Bhuptindra Malla
    d) Jayasthiti Malla

68. When was Motihari-Amlekhjung petroleum pipeline lunched?
    a) 2076 Bhadar 19
    b) 2076 Bhadra 3
    c) 2076 Bhadra 22
    d) 2076 Bhadra 24

69. Who is called the father of modern computers?
    a) Abraham Lincoln
    b) Charles Babbage
    c) James Gosling
    d) Gordon E. Moore

70. Who discovered America?
    a) Columbus
    b) Mark Henery
    c) Mark polo
    d) James Monroe

Computer Literacy

71. LAN stands for:
    a) Large Area network
    b) Long Area Network
    c) Local Area Network
    d) None of these

72. AI stands for:
    a) Artificial Intelligence
    b) Archaeological Intelligent
    c) Artificial Instant
    d) None of these

73. Microsoft Office package includes:
    a) Word, excel, PowerPoint and ms access
    b) excel and PowerPoint only
    c) word and excel only
    d) none of these

74. Which is the fastest memory in computer?
    a) Cache memory   b) RAM   c) Register   d) DRAM

75. Which of the following is not an input/output device?
    a) Printer   b) Readers   c) Displays   d) Magnetic tapes

Business/Economics/Accountancy

76. "Human being should be given priority than wealth accumulation" is the statement of the economist
    a) Adam smith
    b) Alfred Marshall
    c) Lionel Robbins
    d) David Ricardo

77. Suppose the price of a product increases from £12 to £20 and the quantity demanded falls from 55 a week to 45. What is the *price elasticity of demand*?
    a) 0.4
    b) 0.27
    c) -0.4
    d) -0.27

78. In the short run, when the output of a firm increases, its average variable cost:
    a) Remains constant
    b) Increases
    c) Decreases
    d) First decreases and then increases

79. Which of the following statements is false?
    a) Price elasticity of demand is negative for most products
    b) Price elasticity of supply is positive for most products
    c) Income elasticity of demand is positive for normal goods.
    d) Cross elasticity of demand is positive between complements.

80. NEPSE is a
    a) Travel Agency
    b) Stock Exchange
    c) Computer Software
    d) Drug

81. Which of the following statements is correct?
    a) Real GDP is the total market value of the final goods and services produced in a country for sale in a year valued in the base year price.
    b) Your buying stock in the stock market is an example of investment spending
    c) Potential Real GDP is always greater than Equilibrium Real GDP
    d) Social security and welfare are examples of spending on infrastructure.

82. Which of the following is not the stage of the business cycle in macroeconomics?
   a) Prosperity
   b) Recession
   c) Progress
   d) Depression

83. Assume that the market for computers begins in equilibrium. Then, there is a decrease in a price of Pentium processors used in the production of computers. When the new equilibrium is reached,
   a.) The price and quantity of computers will both have risen
   b.) The price and quantity of computers will both have fallen
   c.) The price of computers will have risen and the quantity will have fallen
   d.) The price of computers will have fallen and the quantity will have risen

84. Which among the following statements is INCORRECT?
   a. Coefficient of correlation can be computed directly from the data without measuring deviation.
   b. Measures of Dispersion are also called averages of the second order.
   c. Standard deviation can be negative.
   d. Mean deviation can never be negative.

85. Which statistical measure helps in measuring the purchasing power of money?
   a. Arithmetic average
   b. Harmonic mean
   c. Index numbers
   d. Time series

86 Who is the 'lender of the last resort' in the banking structure of Nepal?
   a. Rastriya Banijya Bank
   b. Nepal Rastra Bank
   c. Reserve Bank of Nepal
   d. Nabil Bank limited

87. ....is the difference between total receipts and total expenditure.
   a. Capital deficit
   b. Fiscal deficit
   c. Budget deficit
   d. Revenue deficit

88. Human Development Index economic is major economic indicator which does not include:
   a. Life expectancy
   b. Decant income level
   c. Education attainment
   d. Infant Mortality

89. The following is the direct tax among:
   a. House tax
   b. Service tax
   c. Entertainment tax
   d. Value Added tax

90. Which among the following is a cause of inflation?
   a. Deficit financing
   b. Rise in external loans
   c. Unfavorable balance of payment
   d. A hike in the CRR by the central bank of the country

91. The world Trade organization (WTO), which replaced the GATT came into effect from____
   a. 1ST January 1991
   b. 1st April 1994
   c. 1st January 1995
   d. 1st May 1995

92. Goodwill is most appropriately classed as
   a. a fixed asset
   b. a fictitious liability
   c. an intangible asset
   d. a semi-fixed asset

93. The accounting concept that dictates that fixed assets should be valued at cost less accumulated depreciation, rather than their enforced saleable value, is the
   a. Net realizable value concept.
   b. Realization Concept
   c. Prudence Concept
   d. Going Concern Concept

94. In times of rising pricing, the historical cost convention:
   a. Understates assets values and profits
   b. Understates assets values and overstates profits
   c. Overstates assets values and profits
   d. Overstates assets values and understates profits

95. A 'true and fair view' is one that:
   a. presents the accounts in such a way as to exclude errors that would affect the actions of those reading them
   b. occurs when the accounts have been audited
   c. shows the accounts of an organization in an understandable format
   d. shows the assets on the balance sheet at their current market price

96. An income and expenditure account is
   a. a summary of the cash and bank transactions for a period
   b. another name for a receipts and payments account
   c. similar to a profit and loss account in reflecting revenue earned and expenses
   d. incurred during a period

97. Goods withdrawn by proprietor for his personal use are entered into the books of accounts as:
   a. Dr Drawings Cr Purchases
   b. Dr Capital Cr Drawings
   c. Dr Purchases Cr Drawings
   d. Dr Purchases Cr Sales

98. The 'accounting equation' can be rewritten as:
    a. assets plus profit less drawings less liabilities equals closing capital
    b. assets plus liabilities less drawings equals opening capital plus profit
    c. assets less liabilities less opening capital plus drawings equals profit
    d. opening capital plus profit less drawings less liabilities equals assets

99. The accounting equation can change as a result of certain transactions. Which one of the following transactions would not affect the accounting equation?
    a. Selling goods more than their cost
    b. Purchasing a fixed asset on credit
    c. The owner withdrawing cash
    d. Debtors paying their accounts in full, in cash

100. Which one of the following is not a profit-making organization?
    a) Partnership
    b) Local government
    c) Sole trader
    d) Limited company