

क. प्रश्नपत्रमा दिइएको वस्तुगत बहुउत्तर मध्ये उत्तरपुस्तिकामा दिइएको ४ वटा गोलो घेरा मध्ये सही उत्तर एकमा गोलो भित्र पूर्ण रुपमा कालो हुने गरी ढाक्नु पर्नेछ । जस्तै सही उत्तर B भए

- A ● B ○ C ○ D

ख. एक भन्दा बढी सम्भावित उत्तरमा चिन्ह लगाएमा वा उत्तरमा केरमेट गरेमा त्यस्ता उत्तरहरु स्वतः रद्द हुनेछन् । जस्तै सही उत्तर B हुँदा

- A ● B ○ C ● D

Council for Technical Education and Vocational Training (CTEVT)

Office of the Controller of Examinations

Sanothimi, Bhaktapur

Diploma /Certificate Level Entrance Exam-2081 (Model Question Paper)

Full Marks: 70 (70*1=70)

Time: 1 hr.45 minutes.

English

Set A

- I generally get my clothes at Tony's.
a) ironing b) to be ironed c) ironed d) to iron
- This street is blocked for few days. A bridge ahead.
a) is constructed b) is being constructed c) is constructing d) construction
- Neither the officer nor his assistants been punished for their unlawful work.
a) have b) has c) had had d) having
- They say measles out in this village.
a) has broken b) having broken c) have broken d) have been broken
- I never use euphemism. My sentences are simple and direct.
a) a b) an c) some d) the
- I have never answered difficult question.
a) such b) such a c) so d) such an
- People say that he had been a criminal in his youth.
a) famous b) notorious c) renowned d) reputed
- Which of the following sentence is correct?
a) Your trousers are loose at the waist. b) Your trousers are loose at the waste.
c) Your trousers are loose at the west d) Your trousers are loose at the weight.
- No one likes rude behaviours,?
a) isn't it b) doesn't he c) don't they d) do they
- You can't smoke here. Please your cigarette.
a) put down b) put off
c) put out d) put on
- Can you tell me from here?
a) how far the boarder is b) how far is the boarder
c) how far is the boarder d) how the boarder is far
- They entered the building by night and made away with all valuables.
a) in b) into c) on d) no preposition
- We always play golf on Sundays.
a) the b) no article c) a d) some
- There are students in my class than in your class.
a) less b) few
c) fewer d) lesser

15. The dietician me to have unhygienic food.
a) advised b) forbid c) suggested d) asked
16. The vermin dangerous but difficult to control.
a) are b) is c) being d) having been
17. Father made me the money he had in his pocket.
a) to count b) counting c) count d) counted
18. Happy Birthday, Rashmi
a) ? b) . c) : d) !
19. The correctly spelt word is
a) maintenance b) maintainence c) mentaince d) maintence
20. You'd better leave now,?
a) wouldn't you b) hadn't you c) didn't you d) won't you

Science

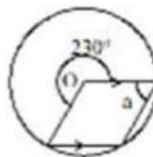
21. Which of the following is **not** fossil fuel?
(तलका मध्ये कुन जीवाशेष इन्धन होइन ?)
a) Biomass b) Coal
c) Diesel d) Petroleum
22. Which hormone helps to control the amount of sugar in blood?
(कुन हर्मोनले रगतमा चिनीको मात्रा घटाउन मद्दत गर्दछ ?)
a) Thyroxin b) Insulin
c) Adrenalin d) Androgen
23. What is the average radius of the earth?
(पृथ्वीको औसत अर्धव्यास कति हुन्छ ?)
a) 6000 km b) 6000 m
c) 6400 km d) 6400 m
24. Which one of the following blood cells kills the invading germs?
(तलका कुन चाहिँ रक्तकोषले शरीरमा आक्रमण गर्ने किटाणुहरुलाई मार्दछ ?)
a) RBC b) WBC
c) Platelets d) Both 'a' and 'b'
25. Which gas is used in photosynthesis process?
(प्रकाश संश्लेषण प्रक्रियामा प्रयोग हुने ग्याँस कुन हो ?)
a) H₂ b) O₂
c) N₂ d) CO₂
26. What is the power of a convex lens having focal length 50 cm?
(५० से.मी. केन्द्रीकरण दूरी भएको कन्भेक्स लेन्सको सामर्थ्य कति हुन्छ ?)
a) + 2D b) - 2D c) + 1D d) - 1D
27. Which one is the main ore of copper?
(तामाको प्रमुख धाउ कुन हो ?)
a) Bauxite b) Chalcopyrite c) Haematite d) Limonite
28. How many chromosomes are in human?
(मानिसमा कति वटा क्रोमोजोमहरु हुन्छन् ?)
a) 22 b) 23 c) 46 d) 64
29. Mass of body on the earth is 100 kg. What will be the mass of it on the moon?
(कुनै वस्तुको पिण्ड पृथ्वीमा १०० के.जी. छ। चन्द्रमामा सो वस्तुको पिण्ड कति होला ?)
a) 600 kg b) 100 kg
c) 60 kg d) 10 kg
30. Which is the SI unit of temperature?
(तापक्रमको SI एकाइ कुन हो ?)
a) Joule b) Kelvin (K) c) °C d) °F

31. Which alkali is used to balance the pH of human stomach?
(मानिसको पेटको pH सन्तुलन गर्न प्रयोग गरिने अल्काली कुन हो ?)
a) Potassium Hydroxide (KOH) b) Magnesium Hydroxide [Mg(OH)₂]
c) Sodium oxide (Na₂O) d) Calcium oxide (CaO)
32. Neuron is related to
(न्युरोन सित सम्बन्धित छ ।)
a) Respiratory System b) Circulatory System
c) Nervous System d) Urinary System
33. Which layer of the atmosphere is important for telecommunication?
(सञ्चारका लागि महत्त्वपूर्ण मानिने वायुमण्डलीय तह कुन हो ?)
a) Troposphere (निम्न मण्डल) b) Stratosphere (समताप मण्डल)
c) Thermosphere (तापीय मण्डल) d) Exosphere (वाह्य मण्डल)
34. Which of the following is a liquid metal?
(तलका मध्ये कुन चाहिँ तरल धातु हो ?)
a) Mercury (पारो) b) Copper (तामा)
c) Lead (सिसा) d) Diamond (हिरा)
35. Which is the chlorinated insecticide?
(क्लोरीनयुक्त कीटनाशक औषधी कुन हो ?)
a) Malathion (मालाथियन) b) Parathion (पाराथियन)
c) Baygon (बेगन) d) DDT (डिडिटी)
36. Which is the molecular formula of methane?
(मिथेनको अणु सूत्र कुन हो ?)
a) CH₂ b) CH₃
c) CH₄ d) C₂H₂
37. The process of getting new plant by combining shoot system of one plant on the root system of closely related plant is called
(बोटबिरुवाका दुई भिन्नभिन्नै भागहरू आपसमा गाँसेर नयाँ बिरुवा उत्पादन गर्ने विधिलाई भनिन्छ ।)
a) Grafting b) Layering
c) Tissue Culture d) Sporulation
38. How much is the standard atmospheric pressure at the sea level?
(समुद्र सतहमा हुने स्ट्यान्डर्ड वायुमण्डलीय चाप कति हुन्छ ?)
a) 750 mmHg b) 760 mmHg
c) 770 mmHg d) 780 mmHg
39. The electronic configuration of an element is 1s², 2s², 2p⁶, 3s². It is
(कुनै तत्वको इलेक्ट्रोन विन्यास 1s², 2s², 2p⁶, 3s² छ । यो हो ।)
a) Metal (धातु) b) Non-metal (अधातु)
c) Metalloid (अर्धधातु) d) An Inert Gas (निष्क्रिय ग्याँस)
40. What is the distance in one light year?
(एक प्रकाश वर्षमा कति दूरी हुन्छ ?)
a) 9.46×10¹⁵ Km b) 9.46×10¹⁰ Km
c) 9.46×10²⁰ Km d) 9.46×10¹² Km
41. "Liquid exerts pressure on all sides". This is related with
(“तरल पदार्थले चाप चारैतिर उत्पन्न गर्दछ” यो सित सम्बन्धित छ ।)
a) Pascal's Law b) Plawan's Law c) Ohm's Law d) Archimedes Law
42. Which wire is used in filament bulb?
(फिलामेन्ट बल्बमा प्रयोग हुने तार कुन हो ?)
a) Aluminium Wire b) Copper Wire c) Iron Wire d) Tungsten Wire
43. Which gland is known by master gland?
(नाइके ग्रन्थीको नामले चिनिने ग्रन्थी कुन हो ?)
a) Salivary Gland (चाल ग्रन्थी) b) Thyroid Gland (थाइरोइड ग्रन्थी)

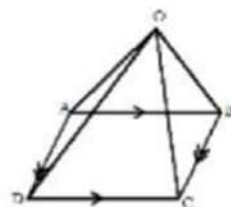
- c) Pituitary Gland (पिट्यूटरी ग्रन्थी) d) Parathyroid Gland (पाराथाइरोइड ग्रन्थी)
44. Which chemical is the cause of depletion of ozone layer?
(ओजोन तहलाई बिनास गर्ने प्रमुख रसायन कुन हो ?)
- a) Chlorine b) Bromine
c) Chlorofluorocarbon d) All of the Above
45. What does $C_6H_{12}O_6$ represent?
($C_6H_{12}O_6$ ले केलाई जनाउँछ ?)
- a) Glycerol b) Glucose c) Ether d) Ethylene

Mathematics

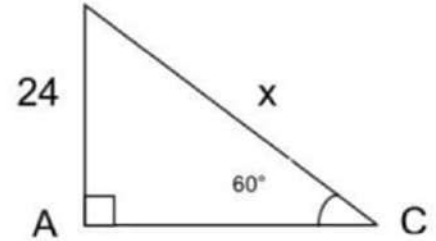
46. If $n_o(A) = 40, n_o(B) = 30$ and $n(A \cup B) = 85$, what will be the value of $n(B)$?
यदि $n_o(A) = 40, n_o(B) = 30$ र $n(A \cup B) = 85$ भए $n(B)$ को मान कति होला ?
- a. 30 b. 40 c. 45 d. 75
47. What is the equation represent Y-axis?
Y-अक्षलाई जनाउने समीकरण के हो ?
- a. $y = 0$ b. $x - y = 0$ c. $x + y = 0$ d. $x = 0$
48. What is the L.C.M. of $x^3 + 1$ and $x^2 + 1 + x$?
 $x^3 + 1$ र $x^2 + 1 + x$ को ल.स. कति हुन्छ ?
- a. $x + 1$ b. $x^2 + 1 + x$ c. $x^3 + 1$ d. $(x + 1)(x^4 + x^2 + 1)$
49. According to annual compound Interest, P is the principal, R is the rate of interest and T is the time what will be the compound Interest?
वार्षिक मिश्रित व्याज अनुसार मूलधन P, व्याजदर R र समय T भए मिश्र व्याज कति होला ?
- a. $\frac{P \times T \times R}{100}$ b. $P \left(1 + \frac{R}{100}\right)^T$ c. $P \left[\left(1 + \frac{R}{100}\right)^T - 1\right]$ d. $P \left(1 - \frac{R}{100}\right)^T$
50. In a triangle ABC, $AB = 12$ cm, $BC = 16$ cm and $\angle ABC = 30^\circ$, what is the area of the triangle ABC?
एउटा त्रिभुज ABC मा $AB = 12$ cm, $BC = 16$ cm र $\angle ABC = 30^\circ$ भए त्रिभुज ABC को क्षेत्रफल कति हुन्छ ?
- a. 48 cm^2 b. $48\sqrt{3} \text{ cm}^2$ c. 96 cm^2 d. 192 cm^2
51. What is the surface area of a sphere of diameter y cm?
व्यास y cm भएको एउटा गोलाको सतहको क्षेत्रफल कति हुन्छ ?
- a. $4\pi y^2 \text{ cm}^2$ b. $2\pi y^2 \text{ cm}^2$ c. $\pi y^2 \text{ cm}^2$ d. $4\pi d^2 \text{ cm}^2$
52. In the given figure, O is the centre of a circle. If the reflex angle is 230° , what will be the value of a?
दिइएको चित्रमा O वृत्तको केन्द्रबिन्दु हो। यदि बृहत्कोण 230° भए a को मान कति होला ?
- a. 65° b. 50° c. 115° d. 230°
53. The price of an article with 13% VAT is Rs. 678. What will be the price of the article excluding VAT?
एउटा वस्तुको मूल्य 13% भ्याट सहित रु. ६७८ छ। भ्याट बाहेक सो वस्तुको मूल्य कति होला ?
- a. Rs. 500 b. Rs. 550 c. Rs. 600 d. Rs. 610
54. Which of the following formula is to calculate the first quartile of continuous data?
वर्गीकृत तथ्याङ्कको पहिलो चतुर्थांश पत्ता लगाउने सूत्र कुन हो ?
- a. $L + \frac{i}{f} \left(\frac{N}{2} - c.f. \right)$ b. $L + \frac{i}{f} \left(\frac{N}{4} - c.f. \right)$ c. $L - \frac{i}{f} \left(\frac{N}{4} - c.f. \right)$ d. $L + \frac{i}{f} \left(\frac{3N}{4} - c.f. \right)$



55. What are the factors of $ab^2 - b(a - c) - c$?
 $ab^2 - b(a - c) - c$ को गुणनखण्डहरू के-के हुन् ?
 a. $(b - 1)(ab - c)$ b. $(b - 1)(ba + c)$ c. $(b + 1)(ab - c)$ d. $(b - 1)(a - bc)$
56. What is the relation between the radius and tangent line at the point of contact of a circle?
 कुनै वृत्तको स्पर्शबिन्दुमा अर्धव्यास र स्पर्शरेखा बीचको सम्बन्ध के हुन्छ ?
 a. Parallel b. unequal c. perpendicular d. Alternate
57. A card is drawn from a well shuffled deck of 52 cards. What is the probability that the card drawn is either a red card or an ace?
 राम्ररी फिटिएको ५२ पत्ती तासको गड्डीबाट एउटा तास निकालियो । उक्त तास रातो रङको पर्ने वा एक्का पर्ने सम्भाव्यता कति हुन्छ ?
 a. $\frac{4}{13}$ b. $\frac{6}{13}$ c. $\frac{7}{13}$ d. $\frac{15}{26}$
58. What is the total surface area of an equilateral triangular based prism?
 आधार समबाहु त्रिभुज भएको प्रिज्मको पुरा सतहको क्षेत्रफल कति हुन्छ ?
 a. $\frac{\sqrt{3}}{4}a^2 + 3ah$ b. $\frac{\sqrt{3}}{2}a^2 + ah$ c. $\frac{\sqrt{3}}{2}a^2 + 2ah$ d. $\frac{\sqrt{3}}{2}a^2 + 3ah$
59. What is the name of instrument to measure angle of elevation and depression?
 उन्नतांश कोण र अवनति कोण नाप्ने यन्त्रलाई के भनिन्छ ?
 a. Hydrometer b. Barometer c. Clinometer d. Telescope
60. An angle which is formed after observing from the top of a hill 51.7m high to the top of a pole 7.7m high is called
 51.7m अग्लो पहाडको टुप्पोबाट ठीक अगाडी रहेको 7.7m अग्लो एउटा खम्बाको टुप्पो अवलोकन गर्दा बन्ने कोणलाई भनिन्छ ।
 a. angle of elevation b. angle of depression c. angle of alternate d. angle of corresponding
61. If mean $(\bar{x}) = 10$, $\Sigma fm = 200$ and number of terms $(n) = 10 + 2a$ of a continuous series, what will be the value of N?
 यदि कुनै अविच्छिन्न श्रेणीको मध्यक $(\bar{x}) = 10$, $\Sigma fm = 200$ र पदहरूको सङ्ख्या $(n) = 10 + 2a$ भए N को मान कति होला ?
 a. 5 b. 10 c. 20 d. 40
62. The price of a shirt including 13% VAT is Rs. 1356. What is the marked price of the shirt if the discount of 10% is given?
 १३% भ्याट सहित एउटा सर्टको मूल्य रु. १३५६ पढेछ । यदि १०% छुट दिइएको रहेछ भने सो सर्टको अङ्कित मूल्य कति रहेछ ?
 a. Rs. 1300 b. Rs. 1333 c. Rs. 1333.33 d. Rs. 1334
63. If $\frac{1}{a} + \frac{1}{b} = \frac{1}{c}$ and $ab = c$, what is the average of a and b?
 यदि $\frac{1}{a} + \frac{1}{b} = \frac{1}{c}$ र $ab = c$ भए a र b को औसत कति हुन्छ ?
 a. 0 b. $\frac{1}{2}$ c. 1 d. $\frac{a+b}{c}$
64. The given figure is a square based pyramid. If OB=10cm and DC=12cm, what will be the volume of the pyramid?
 दिइएको चित्र एउटा वर्गाकार आधार भएको पिरामिड हो । यदि OB=10cm र DC=12cm भए पिरामिडको आयतन कति होला ?
 a. 48 cm^3 b. 96 cm^3 c. $96\sqrt{7} \text{ cm}^3$ d. 192 cm^3



65. In a triangle ABC , $AB = 18 \text{ cm}$ and $AC = 20 \text{ cm}$. If the area of $\triangle ABC$ is $90\sqrt{3} \text{ cm}^2$, what will the value of $\angle BAC$?
- एउटा त्रिभुज ABC मा $AB = 18 \text{ cm}$ र $AC = 20 \text{ cm}$ छन्। यदि $\triangle ABC$ को क्षेत्रफल $90\sqrt{3} \text{ cm}^2$ भए $\angle BAC$ को मान कति होला ?
- a. 30° b. 45° c. 60° d. 90°
66. A motorcycle can travel 400 Km per 10 liters' petrol. How many kilometers does it travel with 3 liters of petrol?
- (एउटा मोटरसाइकल प्रत्येक १० लिटर पेट्रोलले ४०० किलोमीटर पार गर्दछ भने तीन लिटर पेट्रोलले सो मोटरसाइकल कति किलोमीटर पार गर्दछ ?)
- a) 100 Km b) 110 Km c) 115 Km d) 120 Km
67. At what rate of percent per annum will the principal be $\frac{3}{4}$ of the amount in 5 years?
- (प्रतिवर्ष कति प्रतिशत ब्याजदरले पाँच वर्षपछि मूलधन मिश्रधनको तीन चौथाइ हुन्छ ?)
- a) $\frac{16}{6}\%$ b) $\frac{20}{6}\%$ c) $\frac{25}{6}\%$ d) $\frac{28}{5}\%$
68. What is the HCF of p^2-9 and p^2-6p+9 ?
- (p^2-9 र p^2-6p+9 को महत्तम समापवर्तक कति हुन्छ ?)
- a) $(p-3)^3$ b) $(p-3)^2$ c) $p-3$ d) $p+3$
69. What is the LCM of p^3+q^3 and $p^2q-p^2q^2+pq^2$?
- (p^3+q^3 र $p^2q-p^2q^2+pq^2$ को लघुत्तम समापवर्तक कति हुन्छ ?)
- a) $pq(p+q)(p^2-pq+q^2)$ b) $p^2q^2(p+q)(p^2+pq+q^2)$
c) $pq(p-q)(p^2+pq+q^2)$ d) $pq(p+q)(p^2+pq+q^2)$
70. In the given figure, what is the value of x ?
- (दिइएको चित्रमा x को मान कति हुन्छ ?)
- a) $16\sqrt{3} \text{ m}$
b) $\frac{16}{\sqrt{3}} \text{ m}$
c) 16 m
d) $16\sqrt{2} \text{ m}$



Good luck!

Ctevtsolution

Answer Key

English		Science		Math	
Question No.	Answer	Question No.	Answer	Question No.	Answer
1		21		46	
2		22		47	
3		23		48	
4		24		49	
5		25		50	
6		26		51	
7		27		52	
8		28		53	
9		29		54	
10		30		55	
11		31		56	
12		32		57	
13		33		58	
14		34		59	
15		35		60	
16		36		61	
17		37		62	
18		38		63	
19		39		64	
20		40		65	
		41		66	
		42		67	
		43		68	
		44		69	
		45		70	