

SSC H.S. Level (Tier-I) Exam. Practice Set

Answers with Explanation

1. (d) The **Revolution of Dignity** also known as the **Maidan Revolution**, took place in Ukraine in February 2014 at the end of Euromaidan protests, when a series of violent events involving protesters, riot police, and unknown shooters in the Ukrainian capital Kyiv culminated in the ousting of elected President Viktor Yanukovich and the overthrow of the Ukrainian Government. 📄
2. (c) The Gujarat government decided to rename Dragon Fruit as Kamalam in January, 2021
3. (a) Venkatramanan Anantha Nageswaran is an Indian economist and the 18th Chief Economic Advisor to the Government of India. On 28 January 2022, he was appointed as the Chief Economic Advisor of Government of India succeeding Krishnamurthy Subramanian, who completed his three-year term in December 2021. 📄
4. (a) The **Organization of the Petroleum Exporting Countries** is an Intergovernmental Organization of 13 countries. Founded on 14 September 1960 in Baghdad by the first five members (Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela), it has since 1965 been headquartered in Vienna, Austria albeit Austria is not an OPEC member state.
5. (b) The nine-day India-led multilateral naval exercise MILAN 2022 has commenced in the Bay of Bengal, on 25 February. 📄
The US Navy joined navies of India and other countries to participate in the exercise.
6. (c) The 2021 UEFA Super Cup was the 46th edition of the UEFA Super Cup, an annual football match organised by UEFA and contested by the winners of the two main European club competitions, the UEFA Champions League and the UEFA Europa League. The match featured English club Chelsea, the winners of the 2020-21 UEFA Champions League and Spanish club Villarreal, the winners of the 2020-21 UEFA Europa League. It was played at Windsor Park, Belfast, Northern Ireland, on 11 August 2021. Chelsea won the match 6-5 on penalties following a 1-1 draw after extra time for their second UEFA Super Cup title.
7. (b)
8. (d) The State Space Corporation "Roscosmos" commonly known simply as Roscosmos is a state corporation of the Russian Federation responsible for space flights, cosmonautics programs and aerospace research.
9. (b) 📄
10. (b) Most recent Awardees of Jnanpith Award
- | Year | Recipients(s) | Language(s) |
|-------------|-------------------------------|----------------|
| 2021 (57th) | Damador Mauzo | Konkani |
| 2020 (56th) | Nilmani Phookan | Assamese |
| 2019 (55th) | Akkitham Achuthan Namboothiri | Malayalam |
| 2018 (54th) | Amitav Ghosh | English |
11. (c) In India, the Aryans first settled in the Land of the Seven Rivers, then known as Saptasindhu. Saptasindhu is the region of modern Punjab.
12. (c) **Important Points :**
- **Ghiyasuddin Mahmud Shah** permitted the Portuguese to establish factories at **Chittagong and Hooghly**.
 - Ghiyasuddin and his Portuguese allies were defeated by **Sher Shah Suri in 1538**.
 - Hooghly (now Hugli) was founded by the Portuguese in **1537** following the decline of Satgaon, the mercantile capital of Lower Bengal.
13. (d) Warren Hastings laid the foundation of Civil Services in India, Lord Cornwallis rationalised and modernised the same. Therefore, Lord Cornwallis is known as the "Father of Indian Civil Service". 📄
14. (b) Tuzuk-i-Baburi (Baburanamah) is the autobiography of **Zahiruddin Muhammad Babur**, the founder of the Mughal empire in India. Babur wrote it in Turkish language; Mughal imperial officer, Abdur Rahim Khan Khan-i-Khanan, son of Bairam Khan Khan-i-Khanan, translated it into Persian. 📄
15. (a) The Ghadar Party was an international political movement consisting of expatriate Indians to overthrow the British rule in India. The official founding has been dated to a meeting on 15 July 1913 in Astoria, Oregon, the United States of America.

16. (a)

List of Cold Currents

Cold Ocean Current	Region
Humboldt or Peruvian Current	South Pacific Ocean
Kurile or Oya shio Current	North Pacific Ocean
California Current	Pacific Ocean
Labrador Current	North Atlantic Ocean
Canary Current	North Atlantic Ocean
Eastern Greenland Current	Arctic Ocean & North Atlantic Ocean
Benguela Current	South Atlantic Ocean
Falkland Current	South Atlantic Ocean
Northeast Monsoon Current	North Indian Ocean
Somali Current	West Indian Ocean
Western Australian Current	Southern Ocean & South Indian Ocean
South Indian Ocean Current	South Indian Ocean

List of Warm Currents

List of Warm Ocean Current	Region
North Equatorial Current	Pacific Ocean & Atlantic Ocean
Kuroshio Current	Pacific Ocean
North Pacific Current	Pacific Ocean
Alaskan Current	North Pacific
Tsushima Current	Sea of Japan
South Equatorial Current	Atlantic Ocean, Pacific Ocean and the Indian Ocean
East Australian Current	South-Western Pacific Ocean
Florida Current	South Atlantic Ocean & Caribbean Sea
Gulf Stream	North Atlantic Ocean
Norwegian Current	North Sea (Atlantic Ocean) & Barents Sea (Arctic Ocean)
Brazilian Current	South Atlantic Ocean
Mozambique Current	Indian Ocean
Agulhas Current	South-West Indian Ocean
Southwest Monsoon Current	Indian Ocean

17. (c) Tropical Forest Research Institute (TFRI) is a Research institute situated in Jabalpur in Madhya Pradesh. It works under the Indian Council of Forestry Research and Education (ICFRE) of the Ministry of Environment, Forest and Climate Change, Government of India.

18. (c)

● The state has the highest rainfall by North-East monsoon in Tamil Nadu.

● **North-East Monsoon :** প্র্যাচিভর্ষ

❖ The **north-east monsoon**, generally known as a **monsoon of winter** which blows **from the land towards the sea** and **south-west monsoon** is just the opposite, known as a **monsoon of summer** which blows **from sea to land**.

❖ The North-East monsoon usually occurs **within October to March**, although it may change every year.

❖ North-east monsoons are called as **retreating monsoons**.

19. (d) Anti-Defection Law প্র্যাচিভর্ষ

The 10th Schedule of the Indian Constitution (which talks about the anti-defection law) is designed to prevent political defections prompted by the lure of office or material benefits or other like considerations. The Anti defection law was passed by Parliament in 1985 and reinforced in 2002.

❖ The 10th Schedule of the Indian Constitution popularly referred to as the ‘Anti-Defection Law’ was inserted by the 52nd Amendment (1985) to the Constitution.

❖ Defection has been defined as, ‘To abandon a position or association, often to join an opposing group’.

❖ The anti-defection law was enacted to ensure that a party member does not violate the mandate of the party and in case he does so, he will lose his membership of the House. The law applies to both Parliament and state assemblies.

❖ The Anti-Defection Law aims to prevent MPs from switching political parties for any personal motive. প্র্যাচিভর্ষ

20. (b) ❖ Sukumar Sen was the first Chief Election Commissioner of India.

❖ He served as the Chief Election Commissioner of India from 21 March 1950 to 19 December 1958.

❖ He also served as first Chief Election Commissioner in Sudan.

❖ **Article 324** of the Indian Constitution deals with the Chief Election Commissioner of India.

21. (c) The concept of 'Concurrent List' in the Indian Constitution has been borrowed from the Constitution of Australia. Both the Central Government and State Government can make laws on the subjects that come under the category of Concurrent List.

22. (a) Capital market in India is an important part of the financial system. The Indian Securities and Exchange Board (SEBI) regulates the capital market in India.

23. (d) The current repo rate in 2021 is at 4% and the reverse repo rate is at 3.35%. The Reserve Bank of India has kept the repo and the reverse repo rate unchanged in its first monetary policy review after Union Budget 2022.

24. (a) Halogens belong to group 17 of the periodic table and their general electronic configuration is ns^2, np^5 . Hence, they have a tendency to accept one electron to get noble gas configuration.

25. (a) Gastric acid, gastric juice or stomach acid, is a digestive fluid, formed in the stomach and is composed of hydrochloric acid (HCl).

26. (a) LCM of x and $y = 161$
 $\therefore xy = 23 \times 7$
 $\therefore x = 23 : y = 7$
 $\therefore 3y - x = 3 \times 7 - 23$
 $= 21 - 23 = -2$

27. (c) $x = \sqrt{\frac{\sqrt{5}+1}{\sqrt{5}-1}} \times \frac{\sqrt{5}+1}{\sqrt{5}+1} = \sqrt{\frac{(\sqrt{5}+1)^2}{5-1}}$
 $= \sqrt{\frac{(\sqrt{5}+1)^2}{4}} = \frac{\sqrt{5}+1}{2}$
 $\therefore 5x^2 - 5x - 1$
 $= 5 \left(\frac{(\sqrt{5}+1)^2}{2} \right) - 5 \frac{(\sqrt{5}+1)}{2} - 1$
 $= 5 \left(\frac{5+1+2\sqrt{5}}{4} \right) - \frac{5\sqrt{5}+5}{2} - 1$
 $= 5 \left(\frac{3+\sqrt{5}}{2} \right) - \frac{5\sqrt{5}+5}{2} - 1$
 $= \frac{15+5\sqrt{5}-5\sqrt{5}-5-2}{2} = \frac{8}{2} = 4$

28. (c) $\frac{2p}{p^2 - 2p + 1} = \frac{1}{4}$
 $\Rightarrow \frac{p^2 - 2p + 1}{2p} = 4$
 $\Rightarrow \frac{p^2 - 2p + 1}{p} = 8$
 $\Rightarrow \frac{p^2}{p} - \frac{2p}{p} + \frac{1}{p} = 8$

$\Rightarrow p + \frac{1}{p} = 8 + 2 = 10$

29. (d) $2x + 3y = k$
 At $(2, 0)$
 $\therefore 2 \times 2 + 3 \times 0 = k$
 $\Rightarrow k = 4$

30. (b) $\frac{x^2 + 3x + 1}{x^2 - 3x + 1} = \frac{1}{2}$
 $\Rightarrow 2x^2 + 6x + 2 = x^2 - 3x + 1$
 $\Rightarrow 2x^2 - x^2 + 2 - 1 = -6x - 3x$
 $\Rightarrow x^2 + 1 = -9x$

$\Rightarrow \frac{x^2 + 1}{x} = -9 \Rightarrow x + \frac{1}{x} = -9$

31. (d) C.P. of 1 litre of milk = Rs. 100
 \therefore Mixture sold for Rs. 125
 $= \frac{125}{100} = \frac{5}{4}$ litre

\therefore Quantity of water = $\frac{5}{4} - 1$
 $= \frac{1}{4}$ litre

\therefore Required ratio = $\frac{1}{4} : 1$
 $= 1 : 4$

32. (d) Let the first number be x and second number be y .

$\therefore y - \frac{60x}{100} = \frac{52y}{100}$
 $\Rightarrow 100y - 60x = 52y$
 $\Rightarrow 48y = 60x$

$\therefore \frac{x}{y} = \frac{48}{60} = \frac{4}{5}$ or $4 : 5$

33. (c) Weight of new oarsman
 $= (42 + 15 \times 1.6)$ kg
 $= (42 + 24)$ kg = 66 kg

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$$34. (a) \frac{x^3 - y^3}{x^2 + xy + y^2} = \frac{5}{1}$$

$$\Rightarrow \frac{(x-y)(x^2 + xy + y^2)}{x^2 + xy + y^2} = 5$$

$$\Rightarrow x - y = 5 \dots (i)$$

Again,

$$\frac{x^2 - y^2}{x - y} = 7$$

$$\Rightarrow \frac{(x+y)(x-y)}{x-y} = 7$$

$$\Rightarrow x + y = 7 \dots (ii)$$

On adding equations (i) and (ii)

$$2x = 12 \Rightarrow x = 6$$

From equation (ii),

$$x + y = 7 \Rightarrow y = 7 - 6 = 1$$

$$\frac{2x}{3y} = \frac{2 \times 6}{3 \times 1} = 4 : 1$$

35. (a) Let the C.P. of each book be Re. 1.

\therefore Total C.P. of 25 books

= Rs. 25

Their S.P. = Rs. 20

$$\therefore \text{Loss per cent} = \left(\frac{25 - 20}{25} \right) \times 100$$

$$= \frac{5}{25} \times 100 = 20\%$$

36. (c) Here, $x = 33$, $y = 11$

$$\text{Profit \%} = \frac{y \times 100}{x - y} = \frac{11 \times 100}{33 - 11} = \frac{11 \times 100}{22} = 50\%$$

37. (a) Required time = t years

$$\text{S.I.} = \frac{\text{Principal} \times \text{Rate} \times \text{Time}}{100}$$

$$\therefore \frac{6000 \times 4 \times 5}{100} = \frac{8000 \times 3 \times t}{100}$$

$$\Rightarrow 6000 \times 4 \times 5 = 8000 \times 3 \times t$$

$$\therefore t = \frac{6000 \times 4 \times 5}{8000 \times 3} = 5 \text{ years}$$

38. (c) Let the work be completed in x days.

According to the question,

$$\frac{x}{16} + \frac{x-8}{32} + \frac{x-6}{48} = 1$$

$$\Rightarrow \frac{6x + 3x - 24 + 2x - 12}{96} = 1$$

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$$\Rightarrow 11x - 36 = 96$$

$$\Rightarrow 11x = 96 + 36 = 132$$

$$\Rightarrow x = \frac{132}{11} = 12 \text{ days}$$

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39. (c) Let length of train = length of platform = x metre

Speed of train = 90 kmph

$$= \left(\frac{90 \times 5}{18} \right) \text{ m/sec.} = 25 \text{ m/sec.}$$

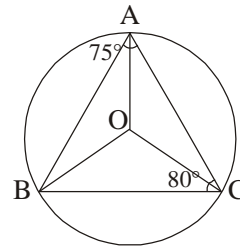
\therefore Speed of train

$$= \frac{\text{Length of train and platform}}{\text{Time taken in crossing}}$$

$$\Rightarrow 25 = \frac{2x}{60} \Rightarrow 2x = 25 \times 60$$

$$\Rightarrow x = \frac{25 \times 60}{2} = 750 \text{ metre}$$

40. (b)



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$$\angle BOC = 2\angle BAC$$

$$= 2 \times 75 = 150^\circ$$

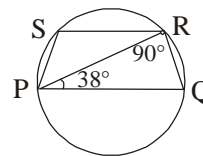
$$\angle ABC = 180^\circ - (75 + 80)$$

$$= 180 - 155 = 25^\circ$$

$$\therefore \angle AOC = 50^\circ$$

$$\text{Hence } \angle OAC = \frac{130^\circ}{2} = 65^\circ$$

41. (c)



Given that, $\angle RPQ = 38^\circ$

$\angle PRQ = 90^\circ$ due to diameter angle in circle

$$\angle RQP = 180 - (90 + 38) = 52^\circ$$

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$\angle PSR = 180^\circ - 52^\circ = 128^\circ$ (Quadrilateral opposite angle property)

42. (d) Let $PQ = x$

$$AP \times AQ = AR \times AS$$

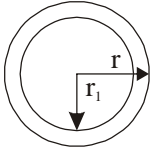
$$3 \times (3 + x) = 6 \times 15$$

$$x = 27$$

43. (a) No. of terms in $1 + 5 + 9 + \dots + 89 = n$
 $a + (n - 1)d = t_n$
 $\Rightarrow 1 + (n - 1)4 = 89$
 $\Rightarrow (n - 1)4 = 89 - 1 = 88$ *অ্যাচিভার্স*
 $\Rightarrow n - 1 = 22$
 $\Rightarrow n = 23$
 Now, $\sin^2 1^\circ + \sin^2 89^\circ + \sin^2 5^\circ + \sin^2 85^\circ + \dots$
 to 22 terms + $\sin^2 45^\circ$
 $= (\sin^2 1^\circ + \cos^2 1^\circ) + (\sin^2 5^\circ + \cos^2 5^\circ) + \dots$
 + to 11 terms + $\left(\frac{1}{\sqrt{2}}\right)^2 = 11 \times 1 + \frac{1}{2}$
 $= 11 + \frac{1}{2} = 11\frac{1}{2}$

44. (a) $\sec \theta + \tan \theta = \sqrt{3} \dots$ (i)
 $\therefore \sec^2 \theta - \tan^2 \theta = 1$
 $\Rightarrow (\sec \theta - \tan \theta)(\sec \theta + \tan \theta) = 1$
 $\Rightarrow \sec \theta - \tan \theta = \frac{1}{\sqrt{3}} \dots$ (ii)
 By subtracting (ii) from (i)
 $\sec \theta + \tan \theta - \sec \theta + \tan \theta$
 $= \sqrt{3} - \frac{1}{\sqrt{3}}$ *অ্যাচিভার্স*
 $\Rightarrow 2 \tan \theta = \frac{3-1}{\sqrt{3}}$
 $\Rightarrow \tan \theta = \frac{1}{\sqrt{3}} = \tan 30^\circ$
 $\Rightarrow \theta = 30^\circ$
 $\therefore \tan 3\theta = \tan 90^\circ = \text{undefined}$

45. (a) Side of a square = x cm
 \therefore Area of rectangle = $3 \times$ area of square
 $\Rightarrow 20 \times \frac{3}{2}x = 3 \times x^2$
 $\Rightarrow x = \frac{20 \times 3}{2 \times 3} = 10$ cm *অ্যাচিভার্স*

46. (b) 
 According to question, Circumference of outer circle
 $= 2\pi r = 132$ cm

$\Rightarrow r = \frac{132}{2 \times 22} \times 7 = 21$ cm
 Circumference of inner circle *অ্যাচিভার্স*
 $= 2\pi r_1 = 88$ cm
 $\Rightarrow r_1 = \frac{88}{2 \times 22} \times 7 = 14$ cm
 \therefore Area of outer circle = πr^2
 $= \frac{22}{7} \times 21 \times 21 = 1386$ cm² and Area of inner
 circle = πr_1^2
 $= \frac{22}{7} \times 14 \times 14 = 616$ cm²

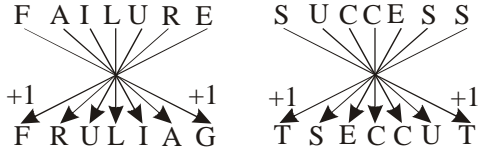
\therefore Area of ring = $(1386 - 616)$ cm² = 770 cm²
 47. (d) If the radius of base of cylinder be r unit and its height be h unit, then
 $2\pi r = a$
 $\Rightarrow r = \frac{a}{2\pi}$

\therefore Volume of cylinder = $\pi r^2 h$ *অ্যাচিভার্স*
 $\Rightarrow V = \pi \times \frac{a^2}{4\pi^2} \times h$
 $\Rightarrow h = \frac{4\pi V}{a^2}$ unit

48. (c) Number of examinees getting more than average marks
 $= 72 + 48 + 24 + 8 = 152$

49. (d) Number of students who got above 80% marks
 $= 24 + 8 = 32$
 \therefore Required percent = $\frac{32}{273} \times 100 = 11.72\%$

50. (a) Number of students who got marks above 60% and below 80% = $72 + 48 = 120$
 \therefore Required percentage = $\frac{120 \times 100}{273} = 43.95\%$

51. (b) *অ্যাচিভার্স*
 52. (a) 

53. (a) Column 1 : $(3)^3 + (2)^2 \rightarrow 31$
 Column 2 : $(4)^3 + (7)^2 \rightarrow 113$
 Column 3 : $(5)^3 + (6)^2 \rightarrow 161$

54. (d)

55. (a)
56. (b) $154 \div 11 \times 6 + 6 - 27 = 63$
57. (b) Pattern : $\div 4, +3, \div 5, +4, \div 6, +5$ প্র্যাচিভর্ক্স
 So, $(3/2) + 5 = 13/2$
58. (a) In 1st : $(18 + 19) - 2 = 35$
 In 2nd : $(22 + 24) - 3 = 43$
 So, missing number = $(26 + 27) - 4 = 49$.
59. (b) Curator is a keeper or custodian of a museum or other collection.
60. (a) BRICS nations.
61. (b) Let present age of Amit = A
 A.T.Q $\Rightarrow A = \frac{5}{4}(A - 5)$
 at the time of sister's marriage A = 25
 \therefore Amit's age at the time of his sister's marriage = $25 - 5 = 20$
 \therefore A.T.Q. \Rightarrow Father's Present age = $2 \times 20 + 5 = 45$ year.
62. (d) Using the proper notations in (d), we get the statement as : $6 - 20 + 12 \times 7 \div 1 = 70$
63. (d)

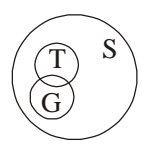
B	E	H	K
+3	+3	+3	

W	Y	A	C
+2	+2	+2	

I	J	K	L
+1	+1	+1	

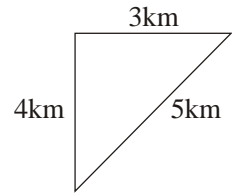
P	R	T	U
+2	+2	+1	
64. (a)

2	3	5
6	1	4

প্র্যাচিভর্ক্স
65. (a) 
66. (d) $a b c \underline{d} d / a b c \underline{c} d / a b \underline{b} c d / a$
67. (d) $7 \times 2 + 9 = 23$
 $2 \times 1 + 6 = 8$
68. (a)

H	U	T=94
8	+21	+20=49
F	U	N=14
6	+21	+14=41

প্র্যাচিভর্ক্স
69. (c) $3 : 18$
 $3^2 + 3 \times 3 = 18$
 $7^2 : 70$
 $7^2 + 7 \times 3$
 $9^2 : 108$
 $9^2 + 9 \times 3$
 $4 : 24$
 $4^2 + 4 \times 3 = 28$

70. (d) $\begin{matrix} \times 10 \\ 8 \quad 64 \quad 80 \\ \times 8 \end{matrix}$ Similarly $\begin{matrix} \times 10 \\ 7 \quad 56 \quad 70 \\ \times 8 \end{matrix}$
71. (b) $13 \quad 182 \quad 17 \quad : 306$
 $13^2 + 13 = 182 \quad 17^2 + 17 = 306$
72. (a) $16 : 64 \quad 49 : 343$ প্র্যাচিভর্ক্স
 $4^2 \quad 4^3 \quad 7^2 \quad 7^3$
73. (d) 
74. (c)
75. (b) Yeast \rightarrow Yelp \rightarrow Yielded \rightarrow Yogurt
76. (d)
77. (b) প্র্যাচিভর্ক্স
78. (c)
79. (c) Persist : Continue to exist; be prolonged.
80. (d) Cogent : (Of an argument or case) clear, logical, and convincing.
 Plausible : (of an argument or statement) seeming reasonable or probable.
81. (b)
82. (d) 'Drawn up an action plan' fits in the context.
83. (d) Option (d) makes the sentence meaningful.
84. (a) 'Was undertaken; singular verb will be used for the word 'production'.
85. (a) Inception : the establishment or starting point of an institution or activity.
86. (c) Canard : a false report or piece of information that is intended to deceive people.
87. (a) প্র্যাচিভর্ক্স
88. (d)
89. (c) Replace "I was suddenly sick" with "I suddenly felt sick".
90. (c) Replace 'and the day dawned dark and chill' with 'and the day turned dark and chill'. As 'Dawn' refers to the first appearance of light in the sky before sunrise. Hence 'Dawn' and 'Dark and chill' will be contrary to each other.
91. (a) Replace 'beside' with 'besides'.
92. (b) Replace 'are' with 'is'. As subject 'foreman' after 'or' is singular. Hence singular verb will be used.
93. (a) Caper : an illicit / ridiculous activity or escapade.
 Appellation : a name or title.
94. (c) 'Accustom' takes preposition 'to' with it. Hence option 'C' fits in the context.

95. (a) Hard put to do (something) is an idiom which means struggling to do or accomplish something. Hence option A improves the sentence.
96. (b) Drop by : visit without appointment. **অ্যাকাইডিং**
Get by : survive.
Give in : To surrender; especially in a fight or argument.
Brush up : To practice and review your knowledge or a skill that you haven't used in
- a while. Hence option B improves the sentence.
97. (c) Implead : prosecute or take proceedings against.
98. (b) Espial : the action of watching or catching sight of something or someone.
99. (a) Discomfit : make (someone) feel uneasy or embarrassed.
- 100.(d) Languor : tiredness or inactivity. **অ্যাকাইডিং**
Impetus : something that makes a process or activity happen or happen more quickly.

