Supplementary Materials

Table 1: The six questions remove from the original MaSCQA and the reason for removal.

Question ID	Questions	"Correct answer"	Reason for removal
G-META-22-39	['Figures P, Q, R and S (in the image) schematically show the atomic dipole moments in the absence of external magnetic field. Which one of the following is the correct mapping of nature of magnetism to atomic dipole moments? \n', '(A) P - Diamagnetism, Q - Antiferromagnetism, R - Paramagnetism, S - Ferromagnetism (B) P – Ferromagnetism, Q - Antiferromagnetism, R – Diamagnetism, S - Paramagnetism (C) P – Paramagnetism, Q – Ferromagnetism, R – Diamagnetism, S - Antiferromagnetism (D) P – Ferromagnetism, Q – Diamagnetism, R – Antiferromagnetism, S - Paramagnetism ']	B	No image provided
G-XEC-2020-22	['Given: Diffusivity of carbon in iron at 1100 °C is $6.0* 10^{-11}m^{2}.s^{-1}$ and erf(z) from the image. A plain carbon steel sample containing 0.1 wt% carbon is undergoing carburization at 1100 ° C in a carbon rich surroundings with fixed carbon content of 1.0 wt% all the time. The carburization time(in hours) necessary to achieve a crabon concentration of 0.46 wt% at a depth of 5mm at 1100 °C is?(round-off to the nearest integer). ']	77 to 83	No image provided
G-XEC-2013-21	['A stress of 10 MPa is applied to an elastomer to generate a strain of 50%. The strain is held constant at this value. After 40 days at 20°C, the stress decreases to 5 MPa. What is the relaxation time constant for this material?']	Marks to all	"Correct Answer" is Marks to all when it is a numerical question
G-XEC-2013-22	['A stress of 10 MPa is applied to an elastomer to generate a strain of 50%. The strain is held constant at this value. After 40 days at 20°C, the stress decreases to 5 MPa. What will be the stress after 60 days at 20°C?']	Marks to all	"Correct Answer" is Marks to all when it is a numerical question
G-META-20-7	['In green sand casting, whiich one of the following is NOT a part of the gating system?\n', '(A) Runner (B) Sprue (C) Riser (D) Pouring basin']	MARKS TO ALL	Wrong question / answer because they are all part of the green sand casting
G-XEC-2016-14	['(Given: Universal gas constant, R = 8.31 J $mol^{-1}K^{-1}$, Faraday's constant, F = 96500 C mol^{-1}). A half cell consisting of pure Ni immersed in an aqueous solution containing Ni^{2+} ions of unknown concentration, is galvanically coupled with another half cell consisting of pure Cd immersed in a 1M aqueous solution of Cd^{2+} ions. The temperature is 25°C and pressure is 1 atm. The standard electrode reduction potentials of Ni and Cd are −0.250 V and −0.403 V, respectively. The voltage of the cell is found to be zero. The concentration(in micro molar) of Ni^{2+} in the solution is ']	6.00 : 7.30	same question twice in the dataset

Figure 1: Graphical representation of the results shown in Table 4 of the article. a)MATCH, b) MCQ, c)MCQN and d)NUM. (+) means result obtained on Wanda, (*) means results obtained on Mac Pro M1.

MCQN RANKING (67 TOTAL QUESTIONS)

c)

Model	Value
CLAUDE_3.5_SONNET	55.1
GPT_4O	50.7
CLAUDE_3_OPUS	49.2
GPT_4_TURBO	48.8
GPT_4O_MINI	47.1
LLAMA3_70B	36.5
GPT_4 (+)	34.4
GPT_4 (*)	33.9
CLAUDE_3_HAIKU	33.0
GPT_3-5 (*)	30.0
GPT_3-5 (+)	29.1
PHI3_14B	23.9
LLAMA3_7B (*)	22.8
LLAMA2_70B	20.7
PHI3_3-8B	18.8
LLAMA_3_7B (+)	15.1
LLAMA_2_7B (+)	14.7
LLAMA2_7B (*)	12.3
MISTRAL_7B	10.0

NUM RANKING (224 TOTAL QUESTIONS)

d)

Model	Value
CLAUDE_3.5_SONNET	167.1
GPT_4O	161.0
CLAUDE_3_OPUS	143.6
GPT_4_TURBO	141.2
GPT_4O_MINI	120.8
GPT_4 (*)	85.7
GPT_4 (+)	80.4
CLAUDE_3_HAIKU	77.0
LLAMA3_70B	73.0
GPT_3-5 (*)	49.9
GPT_3-5 (+)	47.8
PHI3_14B	43.0
PHI3_3-8B	36.8
LLAMA3_7B (*)	21.1
LLAMA_3_7B (+)	18.2
MISTRAL_7B	14.4
LLAMA2_70B	11.8
LLAMA_2_7B (+)	5.8
LLAMA2_7B (*)	5.0