CoSpace Theatre and Dance Interview

Team Name: _____	Judge Initial:
Country: _____	

SECTION 1: ROBOT DESIGN, CONSTRUCTION AND PROGRAMMING (19 MARKS)	**POINTS**
1.1 **Real robot(s) design, construction**	
▪ *Robots are designed and constructed by the students (opposed to standard kits)* ✦ Pre-constructed robot = 0; ✦ Robot with a set of building instructions = 1; ✦ Commercial kit or Lego with creative construction = 1 - 2; ✦ Own design and hand-built = 2;	**/2**
▪ *Mechanical construction and robot reliability:* ✦ Reward design for complexity if it aids robot movement, such as gearing, linkages, pivots, motors are used in design and drive mechanisms	**/3**
1.2 **Electronic hardware, sensors and other technologies**	
▪ *Electronic hardware* ✦ Use of commercial kit, such as Lego NXT, and understanding of its operation (eg. Input, output, power, memory, processor, etc) ✦ Home built circuitry and able to describe their operation (eg. Functions of each board, voltage regulatory, motor speed adjustment, etc)	**/2**
▪ *Effective use of sensors* ✦ Able to install sensors on the robot and understand their function and operation (eg. Type of sensors used, Working principal, etc.) ✦ Able to use sensors creatively and effectively or in different ways (e.g. line tracking = 1, more creative use of sensors = 2-3)	**/3**
1.3 **Programming**	
▪ *Complex, innovative or original programming used appropriate to age and level of expertise, and can explain and under their program thoroughly* ✦ Using loops, interrupt, etc… ✦ Able to describe what this section of program tells the robot to do and modify it as per request.	**/5**
1.4 **Innovation**	
▪ *Reward any innovation in real robot design that aids the performance*	**/4**
Sub-total	**/19**

Mentor involvement: the score can be reduced by up to 20% if we believe there has been significant mentor involvement.

SECTION 2: VIRTUAL ROBOT DESIGN AND PROGRAMMING (8 MARKS)		POINTS
2.1	**Virtual robot(s) design**	
	▪ *Type of virtual robot* ✦ Use of original and innovatively designed robots. Do they add to the performance?	/2
2.2	**Programming**	
	▪ *Program each robot to fit in the theatre performance.* ✦ How do you program each robot according to its role in the Theatre performance? How do you solve the problems encountered? ▪ *Complex, innovative or original programming used appropriate to age group* ✦ Create innovative movement of both wheeled and humanoid robots. ✦ Address the robot balancing, especially humanoid robot dancing.	/4
	▪ *Students can explain, describe and understand their program thoroughly* ✦ Able to describe what this section of program tells the robot to do and modify it as per request.	/2
	Sub-total	/8

SECTION 3: VIRTUAL ENVIRONMENT DESIGN (9 MARKS)		POINTS
3.1	**3D virtual environment design**	
	▪ *The 3D props are original and creative (eg. Teams developed 3D models instead of taking from library)* ▪ *The 3D environment includes 3D models, audio, video. They are creatively embedded into the virtual world.* ▪ *The virtual environment matches the theme of the performance. The overall layout presents a piece of artwork*	/5
3.2	**Drama editor**	
	▪ *How scenes were shot and composed. Reward to the creative use of camera and lighting (eg. use disco light creatively, zoom-in, zoom-out to realize the scene in accordance with the theatre performance.)* ▪ *How scenes were edited? Reward to the complex sequence designed. Eg. creative use of music, video, virtual/virtual communication, virtual/real communication, real robots, virtual robots, etc)*	/4
	Sub-total	/9

SECTION 4: COMMUNICATION (5 MARKS)		POINTS
4.1	▪ *Understand and able to configure the communication* ▪ *Able to establish the communicate between virtual robots/real robots/virtual objects*	
	Sub-total	/5

SECTION 5: EVIDENCE OF AUTHENTICITY (4 MARKS)		POINTS
5.1	▪ *Photographs of different stages of development; Logbook; journal; photographic record or similar documents* ▪ *Students successfully address problems they have faced (eg. How did you stop x from becoming loose during the performance? What have you done to prevent your robot(s) from falling over, or breaking if they fall?, how did you design the virtual robot, etc.)*	
	Sub-total	/4

Total Score: **/45**